

Service Manual

General Description

Adjustment Procedures

Block / Schematic Diagrams

Exploded Views / Parts List

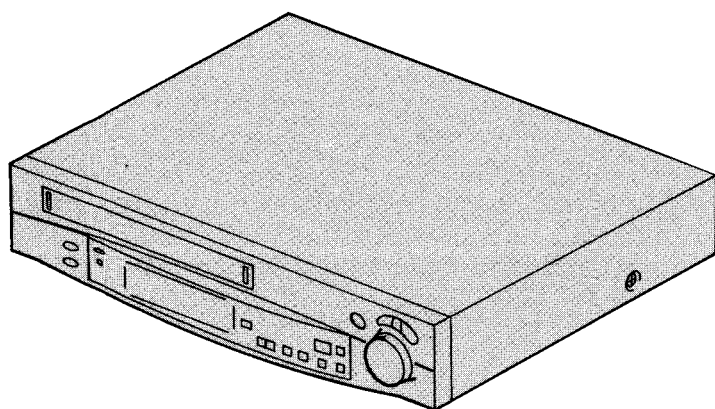
Video Cassette Recorder

Panasonic **VHS** **HQ**
PAL

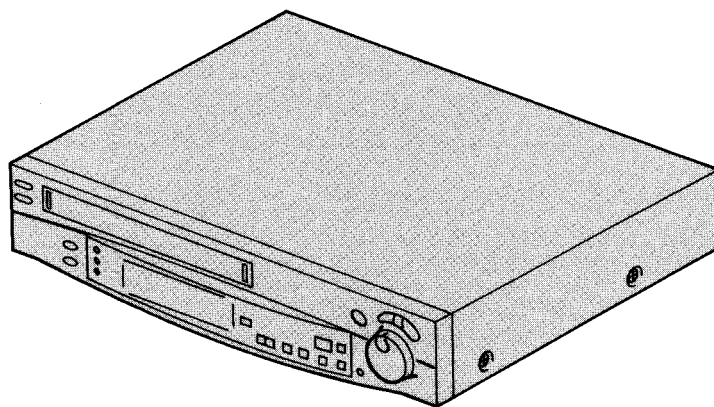
NV-SD30^{EG}_B

NV-SD40^{EG}_B

K-MECHANISM



NV-SD30EG/B



NV-SD40EG/B

Panasonic

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.

Section 1 presents you with some technical know how for actual services and general information of features and controls, enabling you to become familiar with each function.

Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.

In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.

Section 3, 4 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c...

Section 5 contains exploded views and parts list.

Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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I N T E R N A L R E F E R E N C E C O D E S

NOTE: This chart is only for internal reference.
Do not order any parts according to these codes.

P. C. B.	F I L M C O D E
MAIN	HOYS02-03971
TIMER(NV-SD30)	HOYS02-07701
TIMER(NV-SD40)	HOYS02-07699
POWER	HOYS03-01518
INPUT & OUTPUT	HOYS00-03973
TV DEMODULATOR (NV-SD30/SD40EG)	HOYS00-07726
TV DEMODULATOR (NV-SD30/SD40B)	HOYS01-07645
HEAD AMP	HOYS00-05182
LUMINANCE & CHROMINANCE	HOYS01-03A01
OPERATION(NV-SD40)	HOYS00-07716
MIC JACK(NV-SD40)	HOYS00-00S77
VPS(NV-SD30/SD40EG)	HOYS02-07538
POWER TRANSISTOR	HOYS00-00S86
MECHANISM CONNECTION	HOYS01-00S63
LOADING MOTOR	HOYS00-00S75

SPECIFICATIONS (NV-SD30EG/B)

ITEM	SPECIFICATION		ITEM	SPECIFICATION
POWER	SOURCE: 220~240V AC 50/60Hz		VIDEO	INPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75Ω unbalanced
	CONSUMPTION: 25 watts (NV-SD30EG) 24 watts (NV-SD30B)			OUTPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75Ω unbalanced
RECORDING SYSTEM	2 rotary heads, helical scanning system		AUDIO	HEAD: 1 Stationary head (Normal Audio)
	PAL			INPUT: EURO AV Connector (21 pin) More than -6dBV (500mV), 10 kΩ
TV TUNER SYSTEM	NV-SD30EG	VHF I: CHE2~CHE4 VHF III: CHS4~CHE12 VHS H: CHS11~CHS41 (PAL/SECAM B) UHF: CH21~CH69 (PAL/SECAM G) 75Ω terminated		OUTPUT: EURO AV Connector (21 pin) -6dBV (500mV), Less than 1 kΩ
	NV-SD30B	UHF: CH21~CH69 (PAL I) 75Ω terminated	TAPE SPEED	23.39mm/s (PAL) 33.35 mm/s (NTSC: NV-SD30B) Record/Playback Time: 4 hours with 240 min. type tape FF/REW Time: 2.5min. with 180 min. type tape
RF OUT SYSTEM	NV-SD30EG	UHF: CH 36±4 (PAL/SECAM G) 70 ⁺² ₋₃ dBμ, 75Ω terminated	DIMENSIONS	380(W)×89(H)×356(D) mm
	NV-SD30B	UHF: CH36±6 (PAL I) 73±3dBμ, 75Ω terminated	WEIGHT	4.6kg
VIDEO	HEADS: 3 rotary heads 1 pair for recording and playback (L-R heads) 1 pc. for trick play (L' heads)		STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Programme Sheet (NV-SD30EG) 1 pc. AC Mains Lead 1 pc. Infra-res Remote Controller

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

SPECIFICATIONS (NV-SD40EG/B)

ITEM		SPECIFICATION		ITEM	SPECIFICATION
POWER	SOURCE: 220~240 V AC 50/60 Hz			AUDIO	HEAD: 1 Stationary head (Normal Audio)
	CONSUMPTION: 25 watts (NV-SD40EG) 24 watts (NV-SD40B)				INPUT: EURO AV Connector (21 pin) More than -6dBV (500mV), 10kΩ AUDIO IN Connector (Phone type) More than -10dBV (316mV), 50kΩ MICROPHONE JACK - 70dBV
RECORDING SYSTEM	2 rotary heads, helical scanning system				TAPE SPEED
	TV TUNER SYSTEM	NV-SD40EG	VHF I: CHE2~CHE4 VHF III: CHS4~CHE12 VHF H: CHS11~CHS41 (PAL/SECAM B) UHF: CH21~CH69 (PAL/SECAM G) 75Ω terminated	SP: 23.39mm/s (PAL) 33.35mm/s (NTSC) LP: 11.695 mm/s (PAL) 11.12mm/s (NTSC) Record/Playback Time: SP: 4 hours with 240 min. type tape LP: 8 hours with 240 min. type tape FF/REW Time: 2.5min. with 180 min. type tape	
		NV-SD40B	UHF: CH21~CH69 (PAL I) 75Ω terminated		
RF OUT SYSTEM	NV-SD40EG	UHF: CH 36±4 (PAL/SECAM G) 76 ⁺² ₋₃ dBμ, 75Ω terminated	DIMENSIONS	380(W)×89(H)×357(D) mm	
	NV-SD40B	UHF: CH36±6 (PAL I) 73±3dBμ, 75Ω terminated	WEIGHT	4.6kg	
VIDEO	HEADS: 4 rotary heads 1 pair for recording and playback (L-R heads) 1 pair for trick play (L' -R' heads)			STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Programme Sheet (NV-SD40EG) 1 pc. AC Mains Lead 1 pc. Infra-res Remote Controller
	INPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75Ω unbalanced VIDEO IN Connector (Phono type) 1.0Vp-p, 75Ω unbalanced				
	OUTPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75Ω unbalanced				

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

SECTION 1 GENERAL DESCRIPTIONS

1-1. SERVICE INFORMATION

1-1-1. K-MECHANISM INFORMATION

A. SERVICE POSITION

When servicing the K-Mechanism, the Mechanism can easily be fixed by standing the Mechanism up in the Main Frame as shown below to check easily.

In this position, the following services are possible.

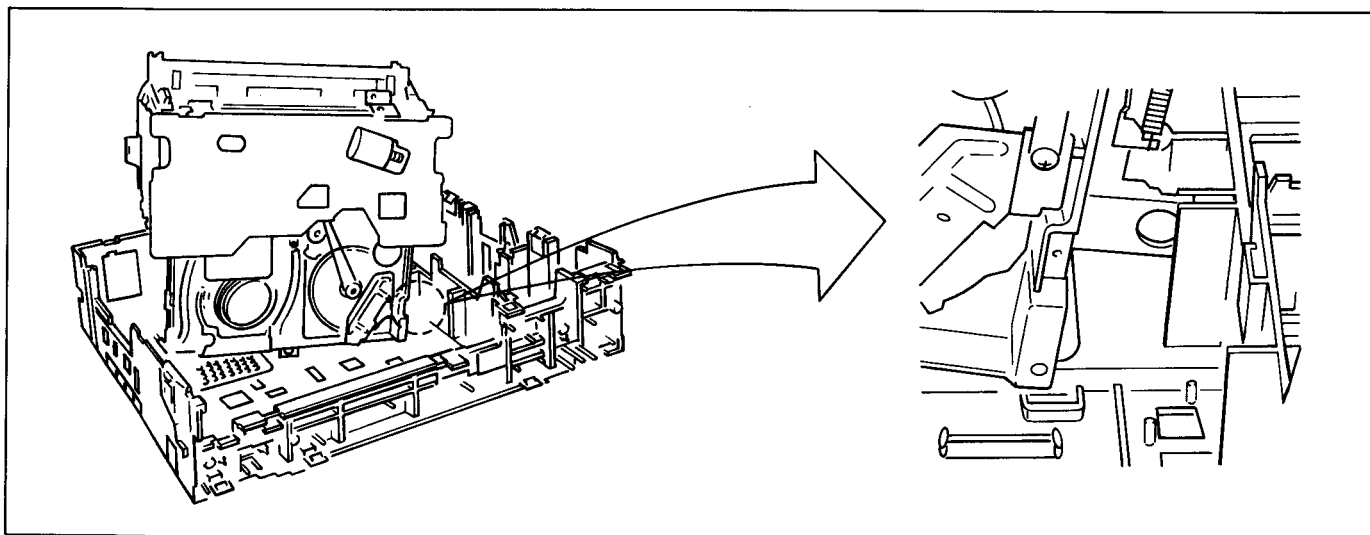


Fig. S1

A-1. CHECKING OF GEAR PHASE ALIGNMENT CONDITION

- 1) Remove the Mechanism Connection C.B.A.
- 2) Check gear phase visually.
(Refer to the Phase Alignment Condition of Mechanism described on the left side of Frame.)

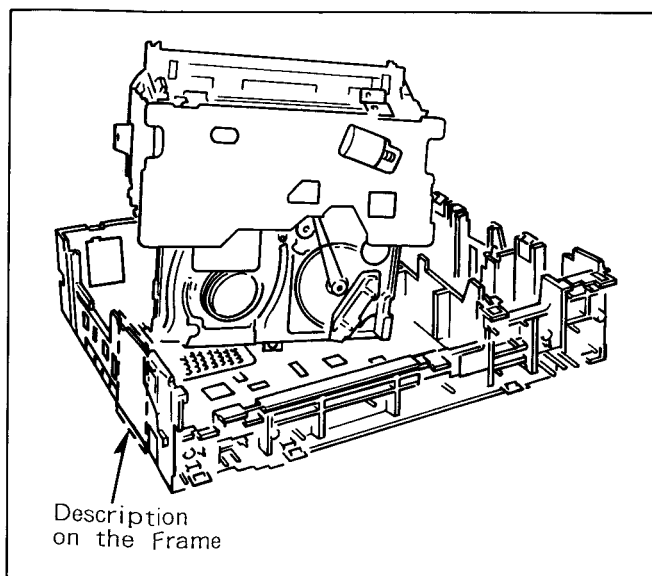


Fig. S2

SECTION 1

A-2. Checking of Loading / Unloading Operation.

There are 3 methods for manual operation of loading/unloading operation as follows.

1. HAND OPERATION

- 1) Remove the Mechanism Connection C.B.A.
- 2) Turn the Worm Gear or the WORM WHEEL GEAR (Remove the Loading Motor Unit) manually.

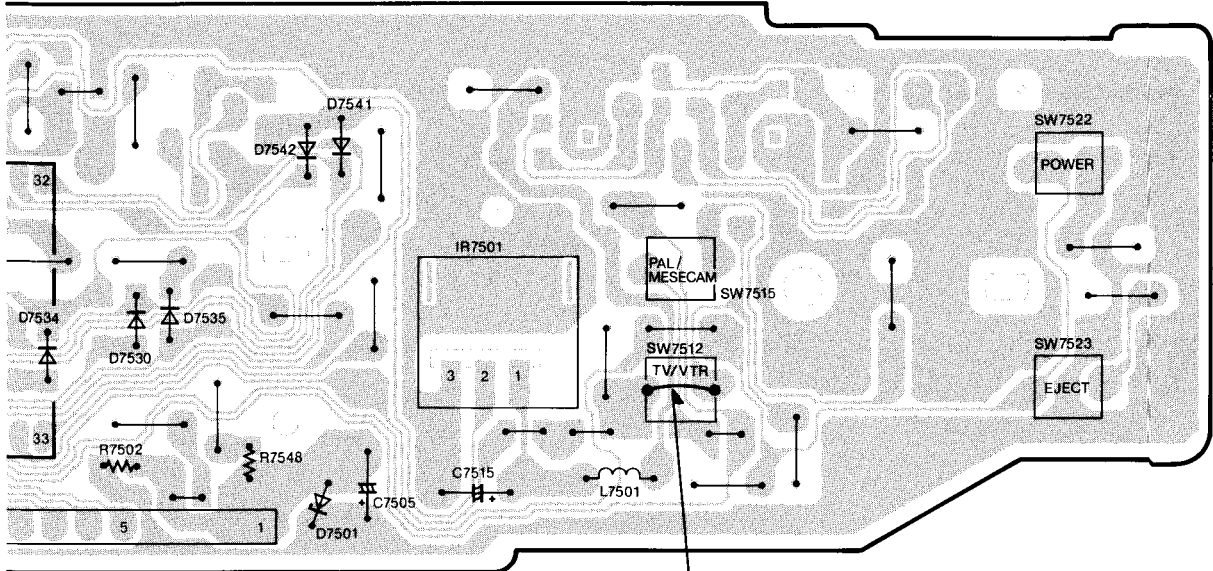
2. BATTERY OPERATION

- 1) Remove the Mechanism Connection C.B.A.
- 2) Connect the Battery or Power Supply (+6V) to the Loading Motor terminals.

3. SERVICE INFORMATION DISPLAY OPERATION

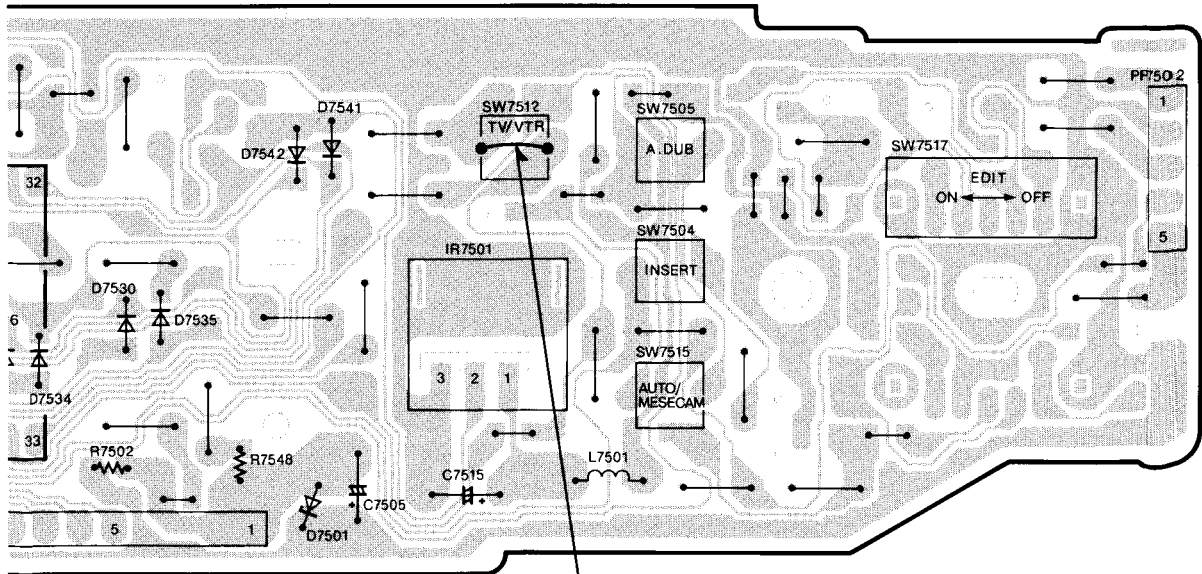
- 1) Set the Service Information Display mode.
(Press the "EJECT" button while turning the "SHUTTLE RING" clockwise.)
- 2) Momentarily make a short circuit by inserting tweezers into the two holes at TV/VTR SW(SW12) LOCATED on the Timer C.B.A.
(The end of display on the Display becomes "—".)
- 3) In the above condition,
The Loading Motor rotates for Loading operation by pressing the "PLAY" button.
The Loading Motor rotates for unloading operation by pressing the "STOP" button.

TIMER C.B.A. (NV-SD30)



Jumper

TIMER C.B.A. (NV-SD40)



Jumper

Fig. S3

Remark:

After checking, check the "SERVICE DISPLAY INFORMATION" mode for final confirmation of movement of Mechanism.

A-3. Checking of operation of Reel Gears.

- 1) Remove the Mechanism Connection C.B.A.
- 2) Set mechanism to "PLAY" position by manual operation of loading.
- 3) Turn the "Rotor Unit" to check movement of reel gears.

B. REPLACEMENT OF CYLINDER UNIT

The Cylinder Unit can be replaced easily by the following method.

- 1) Remove the Top Panel.
- 2) Remove the 3 screws of the Cylinder Unit with a magnetized screw driver through the holes on the Bottom Plate as shown in Fig.S4.

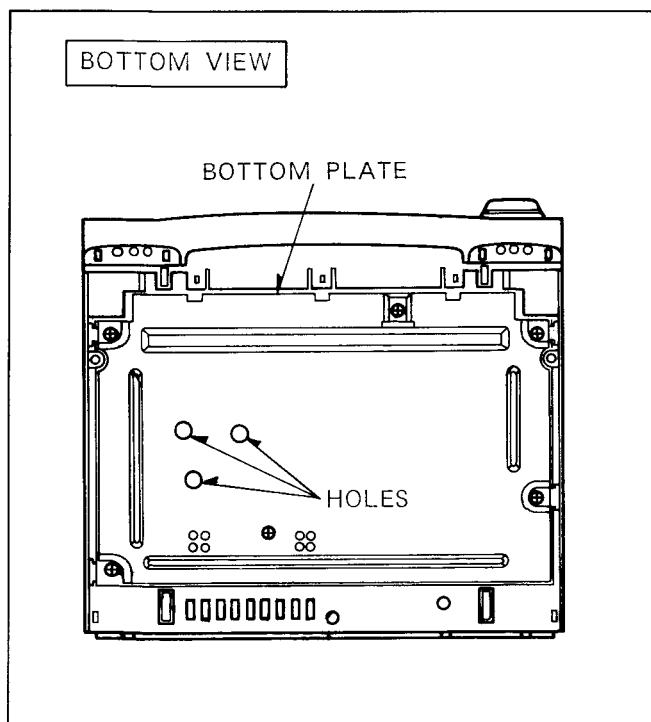


Fig. S4

C. ASSEMBLY OF CAPSTAN STATOR UNIT

When replacing the CAPSTAN STATOR UNIT, the CENTRE FIXING TOOL (VFK0851) must be used to fix the centre of CAPSTAN STATOR UNIT.

Method:

- 1) Place the CAPSTAN STATOR UNIT into position.
- 2) Loosely tighten the 3 screws.
- 3) Insert the CENTRE FIXING TOOL (VFK0851) as shown in Fig.S5.
- 4) Tighten the 3 screws.
- 5) Remove the CENTRE FIXING TOOL.

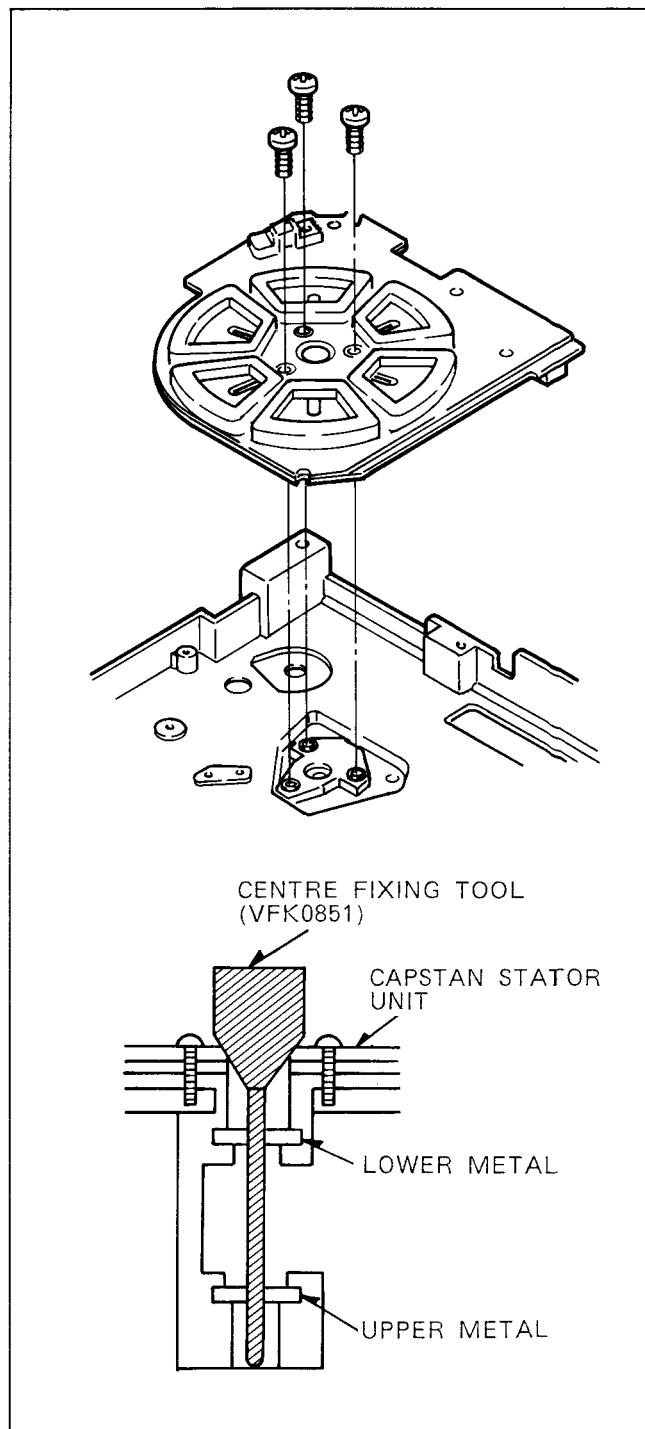


Fig. S5

D. EJECT OPERATION

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

<NOTE>

If the Eject operation is performed without the cassette carriage installed while repairing or making the mechanical phase alignment, the main cam gear will not engage with the carriage connection gear and will not rotate. For performing the Eject operation with the cassette carriage not installed, it is necessary to rotate the carriage connection gear by hand in the direction of the arrow.

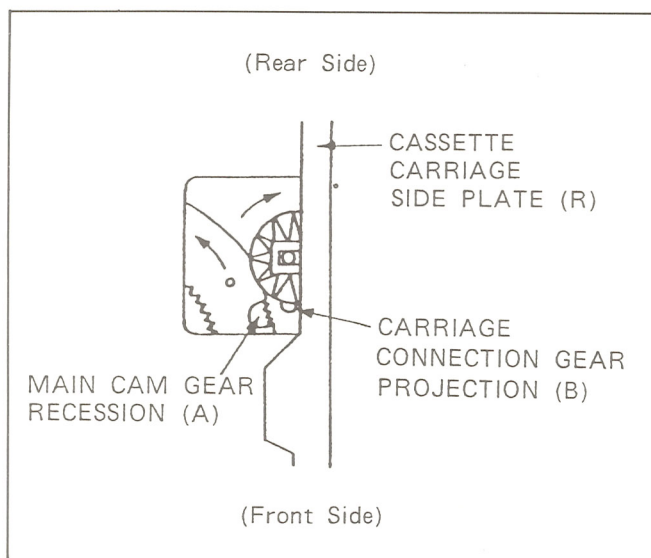


Fig. S6 Top View of Eject Operation

1-1-2. REMOVAL OF THE CASSETTE TAPE.

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to remove the cassette manually. There are 2 methods of removing the cassette.

1. HAND OPERATION

- 1) Remove the bottom plate.
- 2) Turn the WORM GEAR to "A" arrow mark direction manually as shown in Fig.S7, moving the LOADING POST to the unloaded position.
- 3) Turn the CAPSTAN clockwise to take up the tape.
- 4) Turn the WORM GEAR again to eject the cassette.

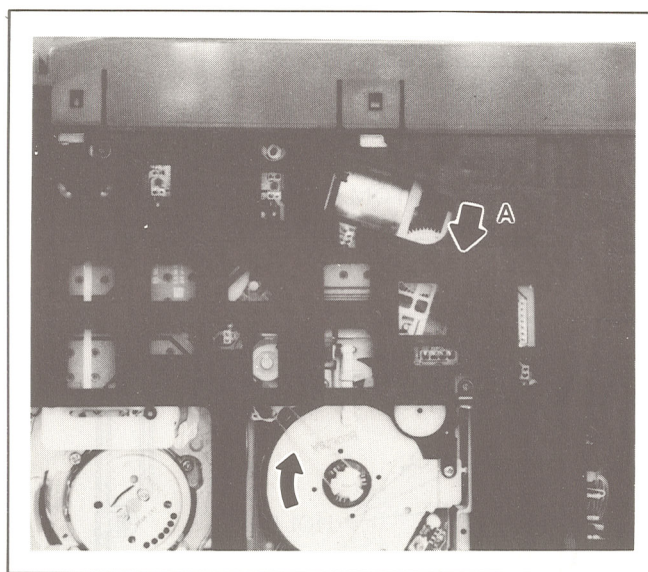


Fig. S7

E. TAKE-UP PHOTO SENSOR OPERATION

Note the following matters for Take-up Photo Sensor Operation.

- 1) While servicing of the K-Mechanism, the unit will not operate properly if a strong light (ex, Fluorescent light, Spot light) falls on the Take-up Photo Sensor.
In this case, cover the Take-up Photo Sensor to prevent the light from falling on it.
- 2) While servicing of the K-Mechanism with "Power On" and without cassette tape inserted, the Unit does not operate properly.

F. SERVICING OF POWER TR. C.B.A.

When removing the connector on the Power Tr. C.B.A., hold the P. C. Board by hand to prevent damage of the Power Tr.

2. BATTERY OPERATION

- 1) Connect the battery to P1503 as shown in Fig.S8.
- 2) After moving the LOADING POST to the unloaded position, disconnect the battery to stop the motor.
- 3) Turn the CAPSTAN to clockwise to take up the tape.
- 4) Reconnect the battery to eject the cassette.

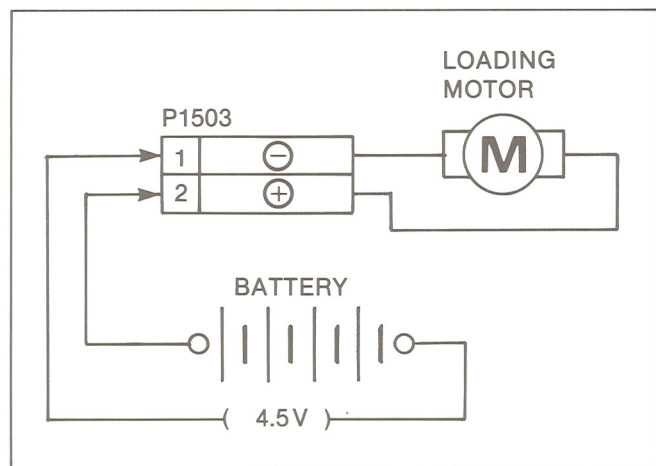


Fig. S8

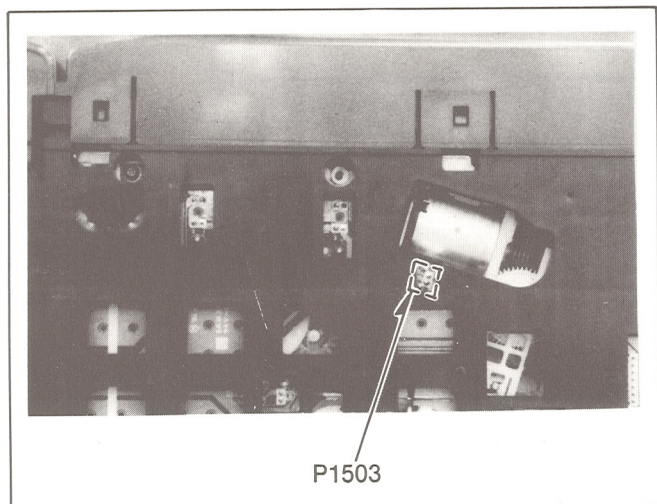


Fig. S9

1-1-3. INSTALLATION OF FLAT CARD CABLE

When installing of the Flat Card Cable to the connector, make sure the direction of the Flat Card Cable. The Insulation Sheet side is backside.

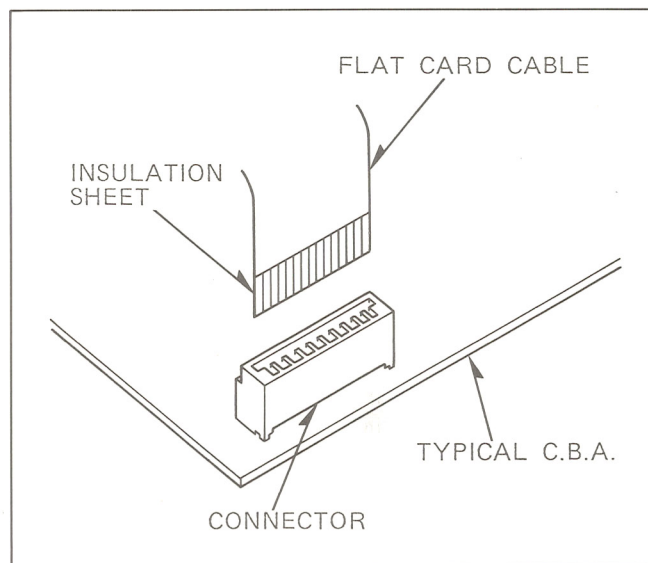


Fig. S10

1-1-4. SERVICING OF LUMINANCE & CHROMINANCE PACK C.B.A.

When servicing of the Luminance & Chrominance Pack C.B.A., set to the following condition for easy servicing.

- 1) Remove the Input/Output Pack C.B.A.
- 2) Remove the TV Demodulator Pack C.B.A.
- 3) Install the Input/Output Pack C.B.A.

NOTE:

For checking of Recording operation and playback signal, use the AV 21 Pin Terminal on rear panel.

1-1-5. INITIALIZATION OF CHANNEL
MEMORY IC (IC7504/M6M80021P)

When replacing the channel memory IC (IC7504/
M6M80021P), the memory IC should be initialized to
keep formal specification.)

Note:

- 1) It should be performed before tuning.
- 2) During initialization or after
initialization within 1 second, do not stop
the power source. (Do not disconnect AC
cord.)
- 3) Meaning of "INITIALIZATION" is to erase the
"SKIP CH" In other words the number of
channel position is the same as displayed
channel.

Method:

- 1) Press the CH UP/DOWN Button so that the
Channel indicator indicates "3".
- 2) Connect a jumper wire between Pin 54 and
Pin 35 of IC7501 for more than 1 second.
- 3) Channel indication changes from "3" to "1".

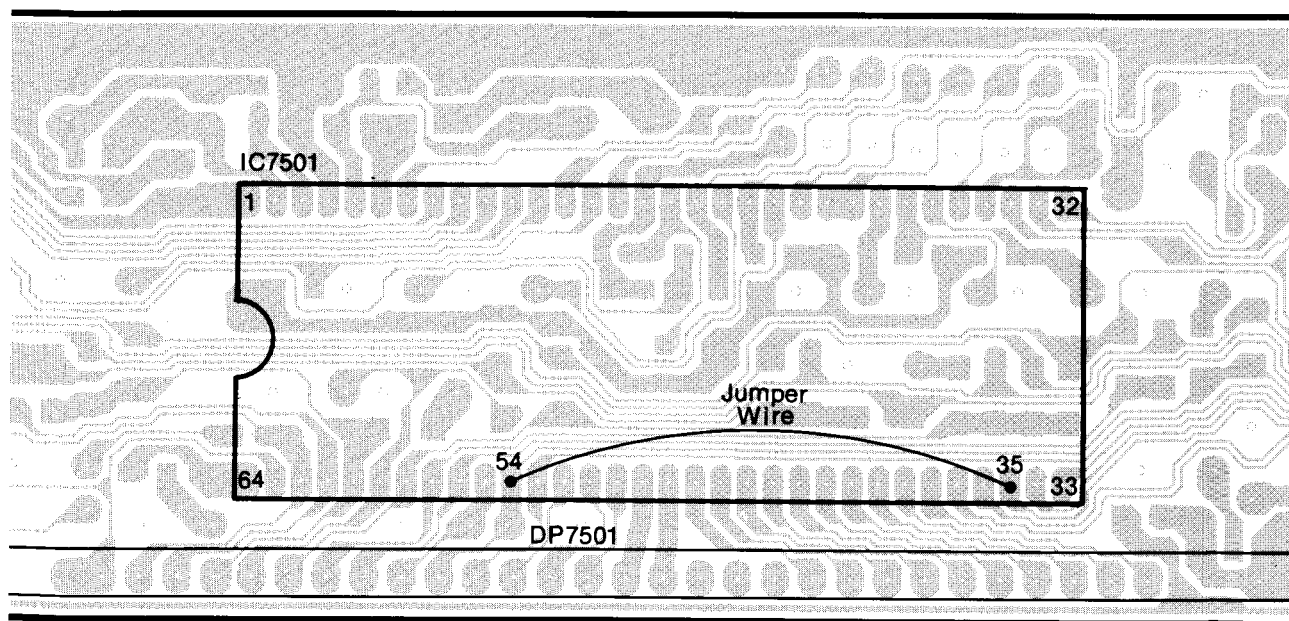


Fig. S11

1-1-6. HOW TO CHECK THE CRACKED CHIP PART

- (1) Apply heat to the soldered portions of chip part using a soldering iron for about 2-3 seconds.
- (2) If the chip part is faulty, it will fracture.

Caution:

Do not leave soldering iron on the PCB too long as damage may occur to the PCB or the chip parts.

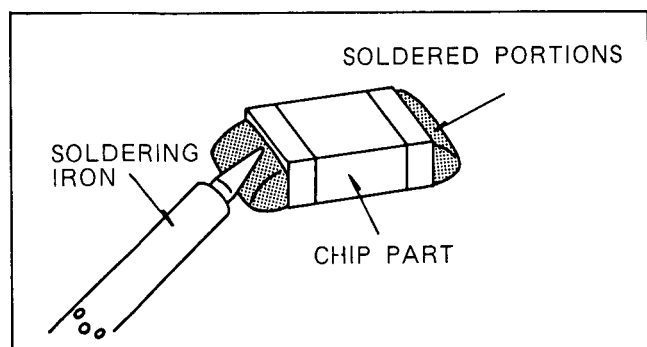


Fig. S12

Note:

Regarding intermittent faults.
The main causes of these faults are poor soldering and cracked chip parts.

1-1-7. HOW TO REPLACE THE CHIP PART

1) REMOVAL (RESISTOR, CAPACITOR, etc...)

- (1) Presolder the one side of soldering portion for chip part and grasp the chip part by tweezers.
- (2) Melt the presoldered portion. And then remove the chip part with a twisting motion while melting the soldering portion of another side quickly.

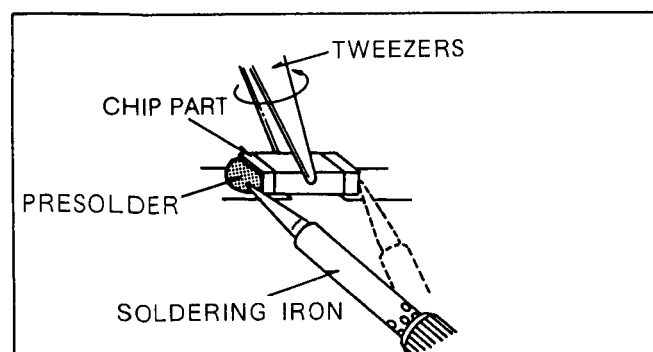


Fig. S13

2) REMOVAL (transistor, diode, etc...)

- (1) Grasp the chip part with tweezers and melt the solder of one lead.

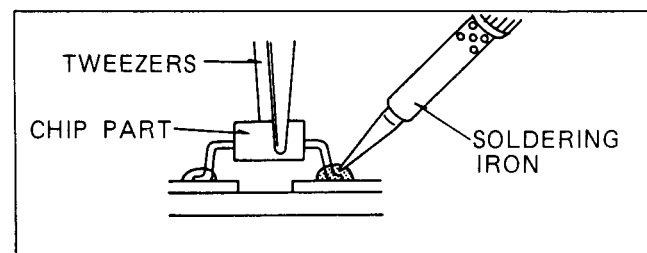


Fig. S14

- (2) Lift the side of that lead upward.

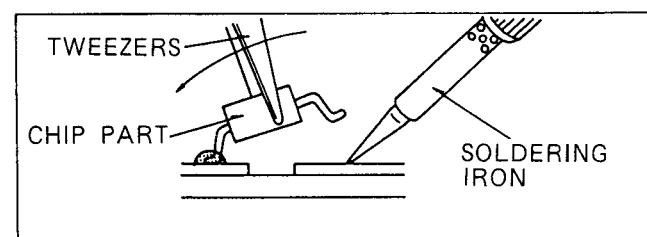


Fig. S15

Caution:

Do not lift the chip part too high as damage may occur to the PCB or the leads that are still soldered on the PCB.

- (3) Simultaneously heat the solder of the two remaining leads and lift part to remove.

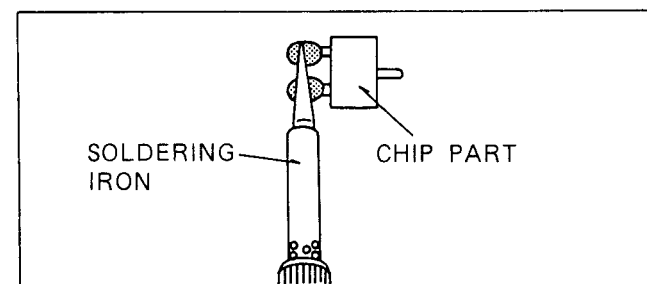


Fig. S16

3) INSTALLATION

- (1) Presolder the one side of contact point on the circuit board.

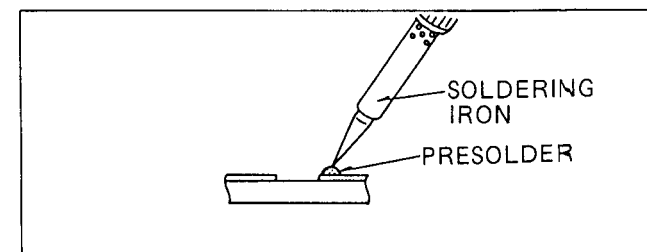


Fig. S17

- (2) To install the chip part, hold in position using tweezers, apply heat to the pre-soldered portions using a fine tip soldering iron.
- (3) Solder the other side of the chip part.
- (4) Check your soldering and ensure no short circuits between pins.

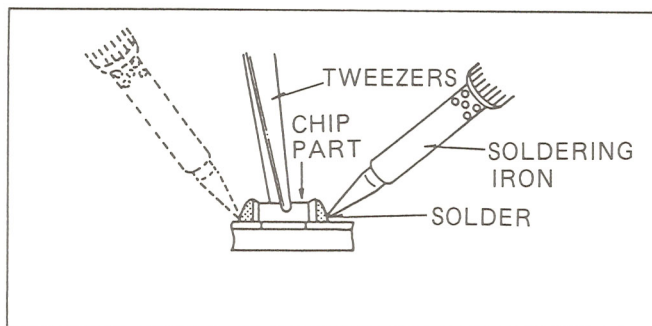


Fig. S18

1-1-8. HOW TO REMOVE THE FLAT-IC

(WITH HOT-AIR FLAT-IC DESOLDERING MACHINE)

(FOR EXAMPLE)

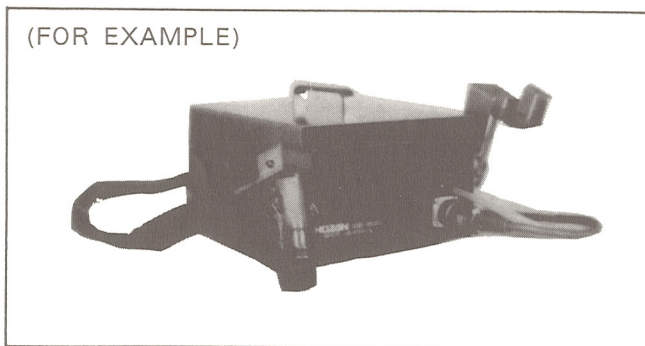


Fig. S19

- (1) Prepare the HOT-AIR FLAT-IC DESOLDERING MACHINE. And then apply hot air to FLAT-IC about 5-8 seconds.
- (2) Remove the FLAT-IC with tweezers while applying the hot air.

Caution:

Do not supply the hot air to the chip parts around the Flat-IC for long time as damage may occur to the chip parts around the Flat-IC.

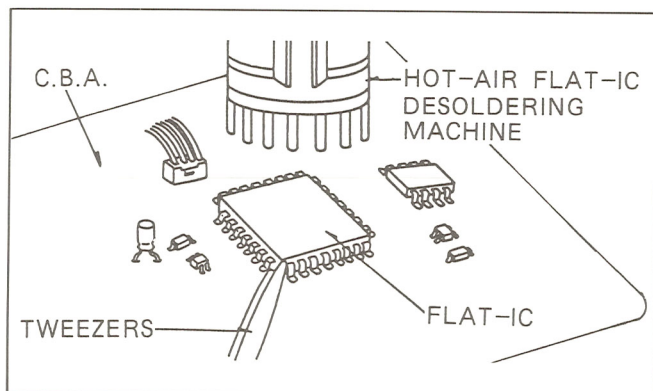


Fig. S20

(WITH SOLDERING IRON)

- (1) Using solder braid remove the solder from all pins of the Flat-IC.
When you use the solder flux which is applied to all pins of the Flat-IC, you can remove it easily.

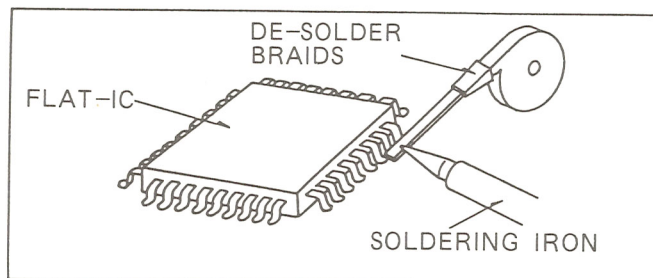


Fig. S21

- (2) Lift each lead of the Flat-IC upward one by one using a sharp pin or non solder wire(iron wire), while heating the pins using a fine tip soldering iron or a hot air blower.

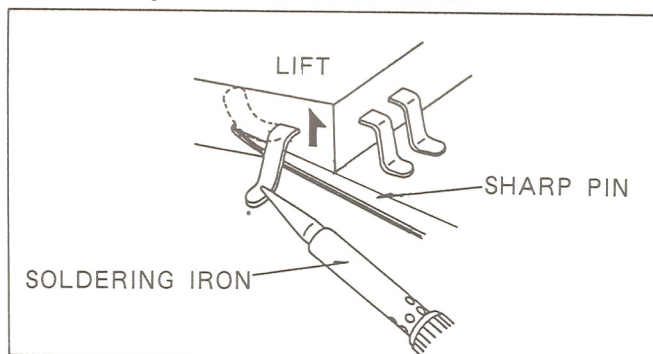


Fig. S22

(WITH IRON WIRE)

- (1) Affix the wire to workbench or solid mounting point as shown in Fig.S23.
- (2) Pull up wire as the solder melts so as to lift the IC lead from the PCB contact pad, while heating the pins using a fine tip soldering iron or hot air blower.

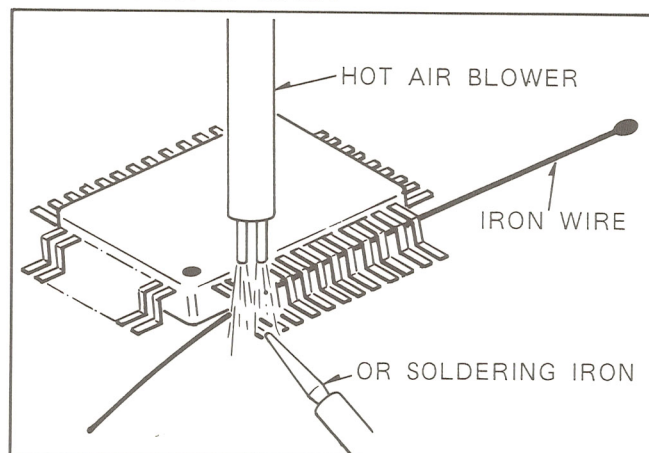


Fig. S23

Note:

When using a soldering iron care must be taken to ensure that the Flat IC is not being held by glue before it is the PCB may be damaged if force is used.

1-2. SERIAL DATA/CLOCK TRANSMISSION ERROR DISPLAY

If the Serial Data/Clock is not transmitted from IC6001 to IC7501, "E9" is displayed as shown in Fig.T1. This indication will be displayed either during the Service Information Display mode or in normal mode.

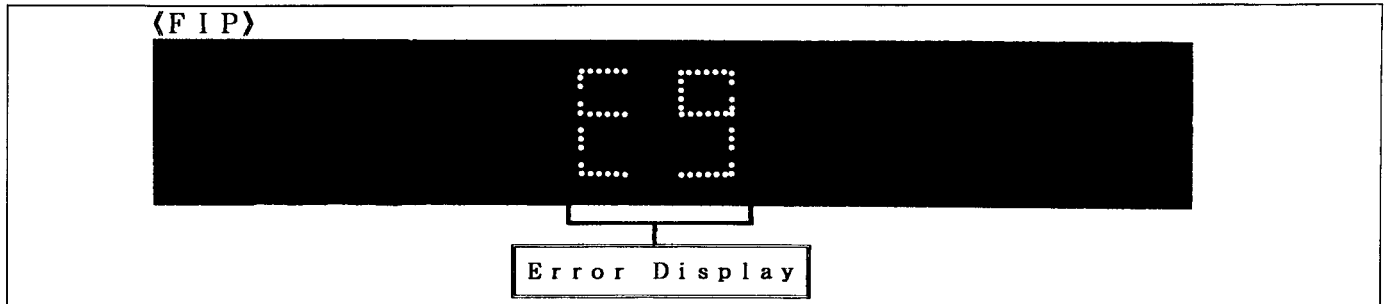


Fig. T1 Serial Data/Clock Transmission Error Display

1-3. SERVICE INFORMATION DISPLAY

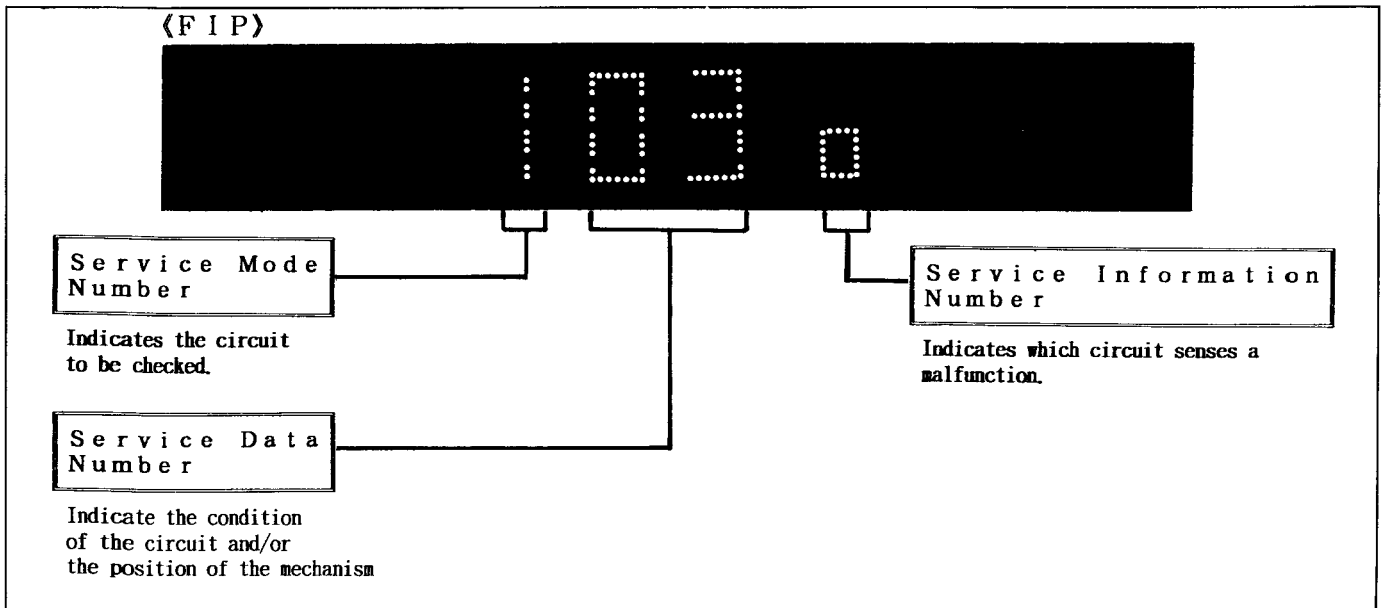


Fig. D1 Service Information Display

1-3-1. Purpose of Service Information Display

This information aids trouble shooting by indicating the source of the malfunction. The service mode number & service data number are used by the technician during repair while the service information can be used by the consumer to diagnose malfunctions allowing the technician to provide a more accurate repair cost estimate and reduce repair time.

In the Service Information Display, there are four digits divided into 3 functions. The first digit indicates which other 6 service modes that the unit is Currently in.

MODE 1 : Check tape protection circuit
MODE 2 : Check tape transport mechanism
MODE 3 : Check mode switching operation
MODE 4 : Check control buttons
MODE 5 : Check capstan motor
MODE 6 : Check cylinder motor

1-3-2. Turning on Service Information Display

There are two ways to turn on the Service Information Display.

- (1) Turn the Shuttle Ring to FF then push the Eject button. The Service Information will be displayed for 1 minute.
- (2) Connecting a jumper wire between TPSEV and TPGND will display the service information indefinitely.

The second and third digits are service data which indicate the condition of the circuit or mechanism being checked.

The fourth digit is the service Information display. It is to be used by the consumer to help determine the source of a malfunction. The service information display operates independently of the service modes and stores the fault indication in memory for as long as AC power is supplied.

1-3-3. Use of Service Modes

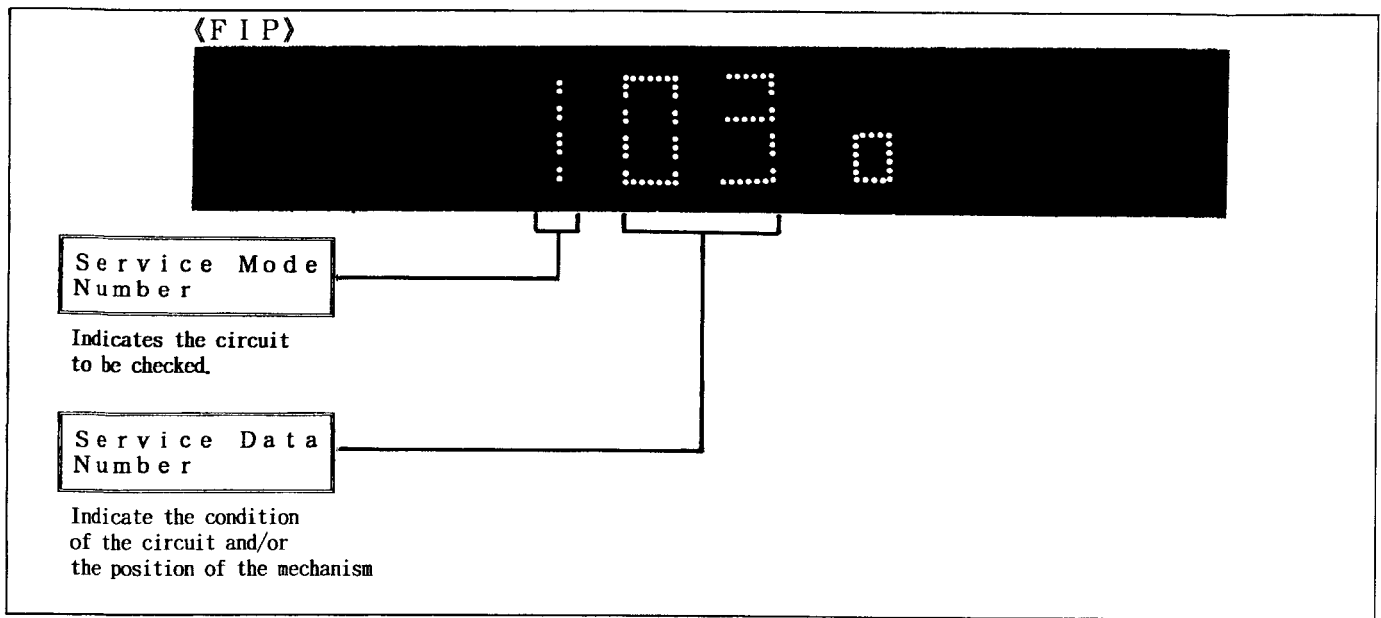


Fig. D2 Service Mode Number and Service Data Number on S.I.D.

- (1) Turn on Service Information Display.
- (2) To change Service Modes turn the shuttle ring to FF then push the Eject button.
- (3) Mode 1 : Checks that the Sensor LED, Supply & Take-up Sensor circuits check the circuits by blocking the light from the Sensor LED to either or both Supply & Take-up Sensors.
When the light is blocked to both sensors, "00" should be indicated on the service data number.
When the light is blocked to the supply sensor, "01" should be indicated.
- (4) Mode 2 : Checks the mode switch circuit while indicating mechanism position.
Service Data Numbers indicate the position of the mode switch and there by the mechanism position.
- (5) Mode 3 : Checks that mode switch circuit operations have been completed.
Service Data Number should indicate "00" after each mechanism operation is completed.

- (6) Mode 4 : Checks the operation circuit.
Indicates if IC6001 receives the operating commands from the mode buttons and/or remote controller.
- (7) Mode 5 : Checks the capstan motor circuit.
Indicates if the IC6001 has received the command to rotate the capstan motor.
- (8) Mode 6 : Checks the cylinder motor circuit.
IC6001 has received the command to rotate the cylinder motor.

<NOTE>

Refer to Fig.D5 for details of Service Data Number.

1-3-4. Service Information Number

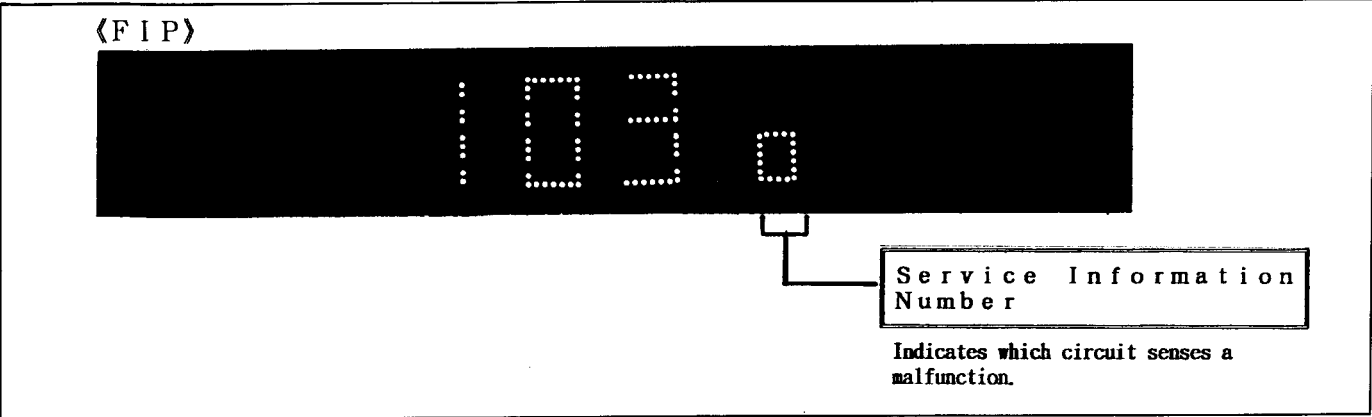


Fig. D3 Service Information Number on S.I.D.

Refer to Fig.D4 for details of Service Information Number.

Note:
The Service Information Number display is independent of the service mode display.
The Service Information Number will be stored as long as AC power is supplied.
If a second error occurs, the most current error will be displayed.

Service Information Number	Malfunction
0	Normal (No problem)
1	Cylinder stop
2	Tape reel stop
3	Stop at position other than 4 or 6
4	Stop during unloading
5	Falty capstan rotation
6	Stop during Cassette-In/Eject operation

Fig. D4 Service Information

Service mode Number	Note for checking Service Data Numbers	Service Data Numbers	Indication	Remarks
1		00	No light detected at either sensor	Tape not required
		01	Tape Beginning. Light to Supply Photo Sensor is blocked.	
		02	Tape End. Light to Take-up Photo Sensor is blocked.	
		03	Light detected at both sensors.	
2		00	EJECT	Tape Required *1 : STOP3 ; The Pinch Roller is on the capstan motor shaft. *2 : STOP ; The Pinch Roller is off the capstan motor shaft. Refer to Fig.D7 to Check mechanism Position and timing.
		01	Cassette-down	
		02	REV, REV SLOW	
		03	Loading/Unloading	
		04	PLAY/REC, STILL/PAUSE, CUE, FWD SLOW, STOP3 * ¹	
		05	STOP* ²	
		06	FF/REW	
		07	Intermediate position	
3	Disregard service data displayed until mechanism operation is completed. Then the display should indicate "00".	00	Any display other than "00" indicates a fault in the mode switch circuit or system.	Tape Required.
4	Display only when the operating button is pressed.	Refer to Fig.D6		Tape not required.
5	Left digit only, disregard Right digit display.	Left Digit Right Digit	8, 9, u, A, -, n, L, and no display indicate that the Capstan motor "PLAY" command received by IC6001.	Tape required. If a symbol other than those listed is displayed, a malfunction in that circuit is indicated.
	Right digit only, disregard left digit display.	Left Digit Right Digit	1, 2, 3, 4, 5, 6, 7, indicate that the Capstan motor CUE, FF, Forward slow" commands received by IC6001.	
	Right digit only, disregard left digit display.	Left Digit Right Digit	8, 9, u, A, -, n, L, and no display indicate that the Capstan motor Reverse, Rew, Reverse Slow commands received by IC6001.	
6	Left digit only, disregard Right digit display.	Left Digit Right Digit	1, 3, 5, 7, 9, A, n and no display indicate that the cylinder motor "ON" command received by IC6001.	Tape required. If a symbol other than those listed is displayed, a malfunction in that circuit is indicated.

Fig. D5 Service Data Display and Indication

SERVICE DATA NUMBERS	MODE BUTTONS	SERVICE DATA NUMBERS	MODE BUTTONS
37	OPERATE	54	RESET
01	EJECT	5	ZERO STOP
09	AUDIO DUB	-0	INPUT SELECT
A3	INSERT	49.40	INDEX
-9	PAL/MESECAM	A1.A2	TRACKING(+, -)/V-LOCK
—	CHECK/PROG.	9	REPEAT
34 OR 35	^ V, + -	8	SKIP
—	NEXT/SP/LP	—	TAPE SELECT
—	SLEEP/SHIFT	—	PROG.
A4	TIMER REC	—	NEXT
08	REC	—	RECORDING SP/LP
—	CLOCK SET	—	CANCEL
—	TUNER PRESET	10	SU(1)
80	PAUSE/STILL	11	MO(2)
00	PLAY	12	TU(3)
00	STOP	13	WE(4)
0-, 07	JOG DIAL (FRAME ADV, REVERSE ADV)	14	TH(5)
03, 02	SHUTTLE RING (FF, REW)	15	FR(6)
—	TV/VTR	16	SA(7)
—	SCANNER ON/OFF	17	SU-SA(8)
—	TRANSMIT	18	MO-SA(9)
0	SEARCH	19	MO-FR(0)
8L	+ (REMOTE CONTROLLER)	3A	-/-
8	- (REMOTE CONTROLLER)		
—	DISPLAY		

Fig. D6 Service Data Display for Service mode 4

1-3-5. Timing Chart from Mode SW to System control IC6001

System control IC6001 senses the mechanism position through the Mode SW.
Fig.D7 shows the timing for Service Mode Number 2.

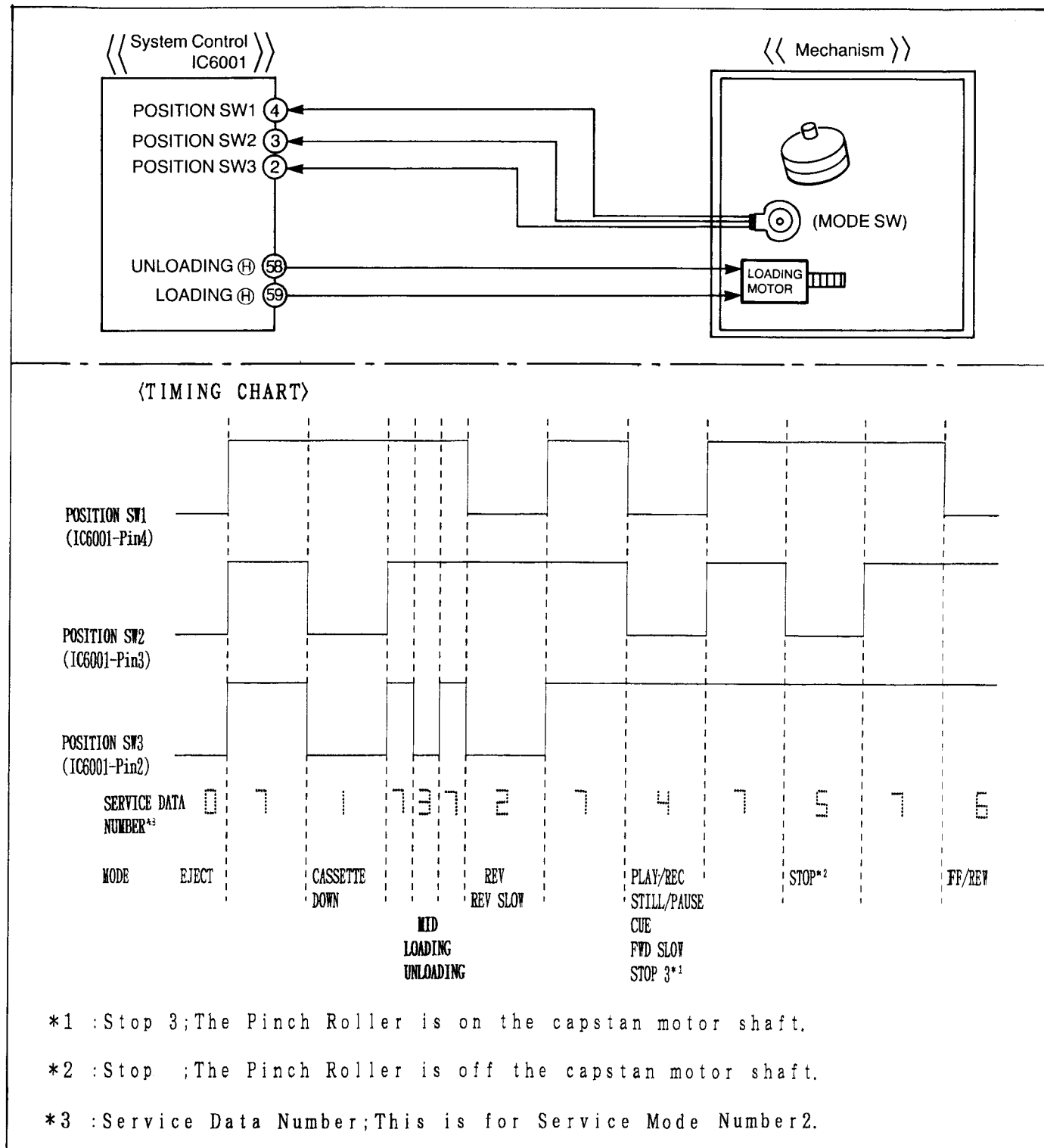


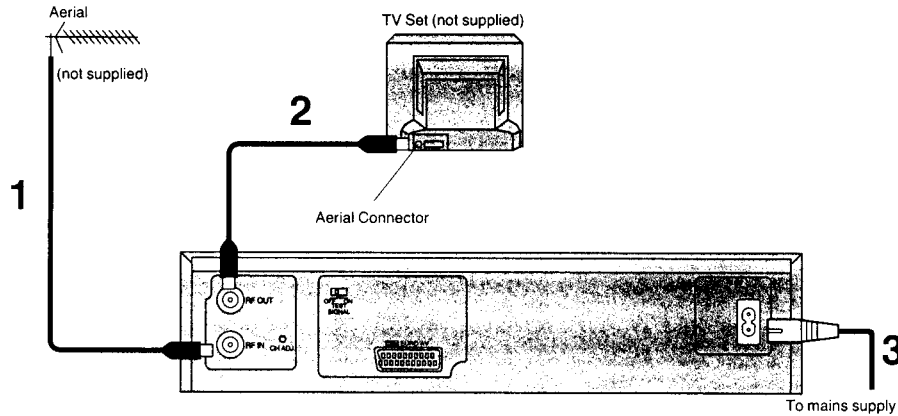
Fig. D7 Timing Chart of Mode SW

Connections

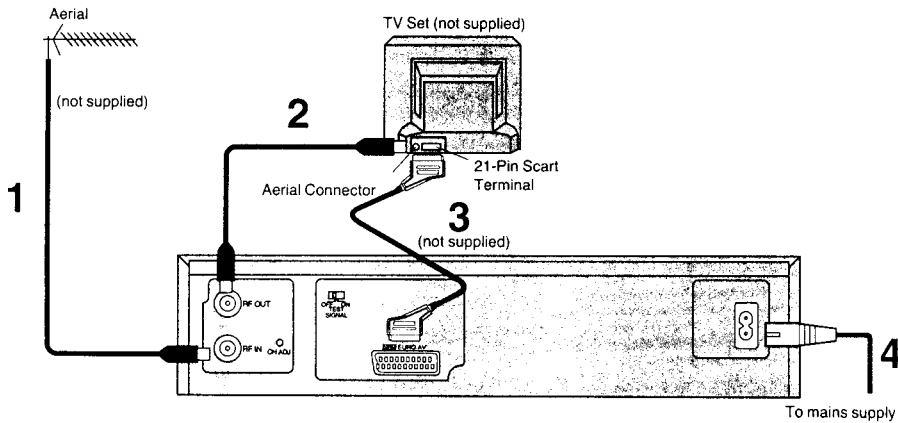
This tells you how to connect the VTR to an aerial, TV, etc.

Basic Connections

The following connections are required to record and play back the VTR through a TV set:

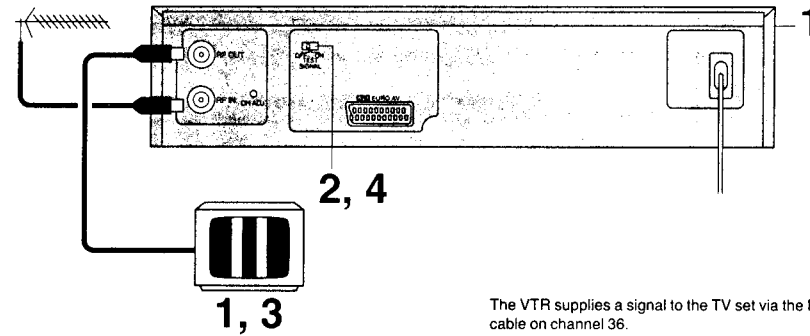


Connection to a TV Set with 21-Pin Scart Terminal



Tuning the TV to your VTR

Connections
Tuning the TV to your VTR



The VTR supplies a signal to the TV set via the RF coaxial cable on channel 36.

It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VTR to the TV through the 21-pin scart terminal then you do not need to follow the procedure mentioned below.

Operations

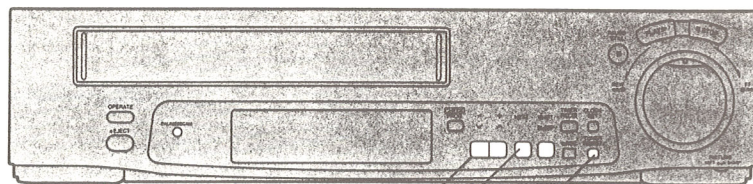
- 1  Turn on the TV and VTR.
- 2  To generate a test pattern, set **TEST SIGNAL** to ON.
- 3  Set the TV to an unused position which you wish to use for your video playback.
- 4  Set **TEST SIGNAL** to OFF.

Note:

The test signal is transmitted on video channel 36. If you are encountering interference from a TV broadcast on this video channel, you may readjust to another free channel (32-40) by using the **CH ADJ.** screw which is located on the rear of the VTR. Please note that if the **CH ADJ.** screw is used then you will have to retune your TV to the test signal as in item 2 to 4 above.

Storing TV Broadcasts into your VTR

Storing TV Broadcasts into your VTR



2, 3 1, 4

Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and select the programme position except A1.

Operations

Display Symbols

1	TUNER PRESET 	Keep TUNER PRESET pressed until a bleep sound is heard.
2	- + NEXT 	Select the programme position, then press NEXT .
3	- + 	Search for the required TV station. • Press PAL/MESECAM to select SECAM system so that MESECAM indicator is lit. • Press NEXT and repeat steps 2-3 for each programme position you want to tune to a station.
4	TUNER PRESET 	Press TUNER PRESET twice.

Fine Tuning Procedure

- 1 Press **TUNER PRESET** until a bleep sound is heard, and then press again.
- 2 Press **NEXT**.
- 3 Press + or - to obtain the best tuning condition.
 - "AFC" Indicator disappears.
 - To return the tuning to its former state, press **SHIFT**.
- 4 Press **TUNER PRESET**.

Blanking of Unoccupied Programme Positions

- 1 Press **TUNER PRESET** until a bleep sound is heard.
- 2 Select a programme position which you do not want to tune to a TV station, by using + or -.
- 3 Press **SHIFT**. ("—" is displayed.)
 - Repeat steps 2 and 3 for other unoccupied programme positions to skip during the selection of the programme positions.
 - To cancel the blanking of a programme position, select that programme position on the VTR and then press **SHIFT**.
- 4 Press **TUNER PRESET** twice.

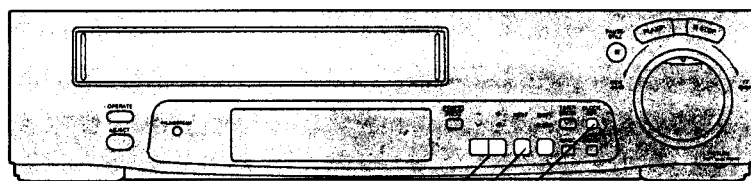
Channel Plan

Channel Indication	TV Channel	
	Germany/Italy	Other Countries
2-12	*E2-E12	E2-E12
13-20	A-H (Only Italy)	—
21-69	21-69	21-69
74-76	—	S1-S3
80-82	—	M1-M3
83-89	S4-S10	M4-M10
90-99	S11-S20	U1-U10
121-141	S21-S41 (Only Italy)	S21-S41

*In Italy: H1...(11), H2...(12)

Setting the Clock of the VTR

Setting the Clock of the VTR



The built-in clock is used to activate the timer for automatic recording and must be set to the correct time.
The built-in digital clock employs the 24-hour system.

Preparation

Turn on the VTR.

2 1 • 3

For Example:

Date: 16th, October, 1999
Time: 20:15

Operations

Display Symbols

1	CLOCK SET 		Keep CLOCK SET pressed until a beep sound is heard.
2	Set each item by pressing + or - and NEXT .    ↓ NEXT 	    	Set Year "99". Set Month "10". Set Date "16". Set Hour "20". Set Minute "15". • There is no need to press NEXT .
3	CLOCK SET 		Press CLOCK SET . • The clock will start.

Note:

The clock operates for at least 60 minutes by its backup system in the event of power failure.

Time Reset Function

If the clock is less than two minutes slow or fast, it can easily be reset to the proper time.

For example: Resetting the clock to 12:00.00.

- 1 Press **CLOCK SET** at any time between 11:58.00 and 12:01.59 until the beep sound is heard.
- 2 Press **CLOCK SET** again as soon as you hear the 12:00.00 time signal.

Summer Time Function

Setting to summer time

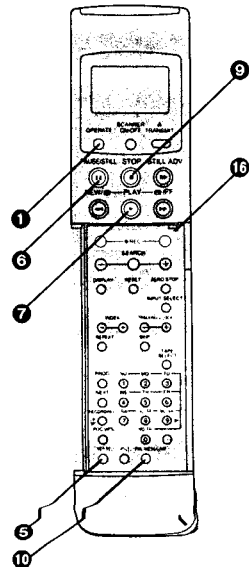
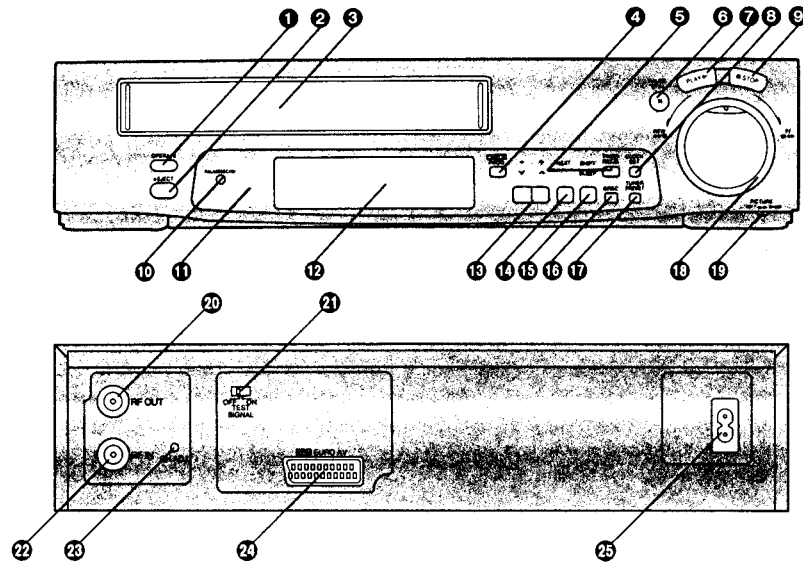
- 1 Keep **CLOCK SET** pressed until the beep sound is heard.
- 2 Press **SHIFT**.
• The time on the clock is advanced by 1 hour.
- 3 Press **CLOCK SET**.

Returning from summer time to standard time

- 1 Keep **CLOCK SET** pressed until the beep sound is heard.
- 2 Press **SHIFT** twice.
• The time on the clock is set back by 1 hour.
- 3 Press **CLOCK SET**.

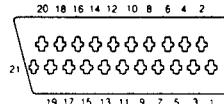
Controls and Connection Sockets

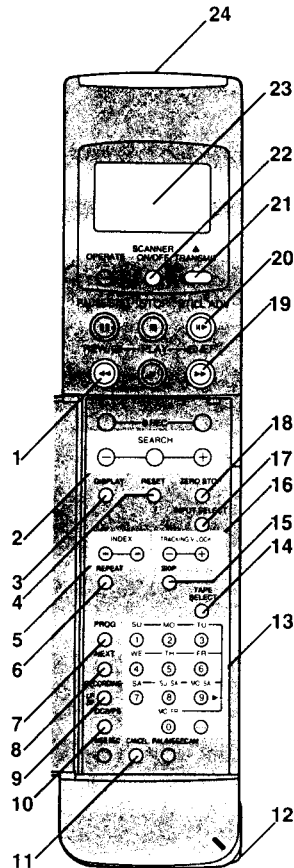
Controls and Connection Sockets



- 1 OPERATE**
To turn the VTR on and off.
- 2 EJECT**
To eject a video cassette.
- 3 Cassette Compartment**
Insert a video cassette here.
- 4 CHECK/PROG**
To select a timer programme number.
"1, 2, 3... or 8" is lit.
To display details of preset timer recording.
- 5 TIMER REC**
To turn the timer recording function on and off.
[] is lit or not lit.
Once activating timer recording function, the normal VTR operation is not possible unless this button is set to off.
- 6 PAUSE/STILL**
During playback: Still picture.
During recording: To interrupt recording.
- 7 PLAY**
To start playback. ">" is lit.
- 8 CLOCK SET**
To set the time.
- 9 STOP**
To stop any playback or recording.

- 10 PAL/MESECAM**
Set according to the colour TV system used during recording and playback.
When the MESECAM Indicator is lit, the MESECAM system is selected.
- 11 Infra-red Remote Control Receiver Window**
- 12 Display**
- 13 V A/- +**
To select the required programme position (TV station).
To set the clock and timer recording.
- 14 NEXT**
To proceed to the next item during setting procedure.
- 15 SLEEP/SHIFT**
To set the time to turn off the VTR automatically.
To blank unoccupied programme position.
- 16 REC**
To start a recording.
- 17 TUNER PRESET**
To initiate TV station settings for the tuner.
- 18 Shuttle Ring**
In the stop mode: To rewind or fast forward the tape.
In the playback mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.
- 19 PICTURE**
To make picture sharper (SHARP) or softer (SOFT).

- 20 RF OUT**
To connect to the aerial terminal on a TV set.
 - 21 TEST SIGNAL**
The test signal is transmitted on channel 36.
 - 22 RF IN**
To connect to the external aerial.
 - 23 CH ADJ.**
To adjust the RF transmitting channel 32-40.
 - 24 EURO AV (AV1)**
This 21-pin scart terminal carries input and output signals for both picture and sound. TV sets equipped with a similar socket can be connected here.
- 
- | | |
|----------------|---------------------|
| 1 AUDIO OUTPUT | 8 SWITCHING VOLTAGE |
| 2 AUDIO INPUT | 17 VIDEO GROUND |
| 3 AUDIO OUTPUT | 19 VIDEO OUTPUT |
| 4 AUDIO GROUND | 20 VIDEO INPUT |
| 6 AUDIO INPUT | 21 GROUND |
- No connection; 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 18
- 25 AC IN~**
To connect to the main power supply.



1 REW (REWIND)

In the stop mode: To rewind the tape.
In the playback mode: To search backward.
In the rewind mode: To obtain high speed picture.
"◀◀" is lit.

2 SEARCH

To adjust the playback speed backward or forward.

3 DISPLAY

To change the indication on the VTR Display.

◀Clock→Counter→Remaining Tape Time→

4 RESET

To reset the tape counter (elapsed time) to "0:00.00".
•The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

5 INDEX

For the index search function.

6 REPEAT

For the repeat playback function.

7 PROG

For timer recording by using the remote controller.

8 NEXT

To proceed to the next item during setting procedure.

9 RECORDING SP/LP

No function.

10 PDC/VPS

To turn the VPS or PDC function on and off.

11 CANCEL

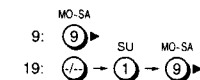
To cancel the settings made for a timer recording.

12 Bar Code Reading Section

After the Bar Code Reader is turned on, the tip lights in red.

13 Programme Position Selector Buttons

•To select the programme positions.



•To programme a timer recording.

14 TAPE SELECT

To set the cassette tape length in order to obtain correct indication of the remaining tape time.
E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

15 SKIP

To start cue playback in 30 seconds interval during playback.
•Each press gives a 30 seconds time span up to 4 minutes.

16 TRACKING/V-LOCK

For manual tracking adjustment

The + and - buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment

When noise bars appear during Still, Still Advance or Slow playback, switch over to slow playback and adjust with the "+" or "-" button to reduce the noise bars.

For vertical locking adjustment

Use the + and - buttons to minimize any vertical jitter during still-picture playback.

17 INPUT SELECT

To select the "A1" external recording source.

18 ZERO STOP

For the zero stop function.

19 FF (FAST FORWARD)

In the stop mode: To fast forward the tape.
In the playback mode: To search forward.
In the fast forward mode: To obtain high speed picture.
"▶▶" is lit.

20 STILL ADV

To advance a still picture during still playback.

21 TRANSMIT

To transmit the data that has been set on the remote controller to the VTR.

22 SCANNER ON/OFF

To turn the Bar Code Reader on and off.

23 Display

24 Infra-red Transmitter

The programming data are transmitted from here to the VTR.

Power source for the remote controller

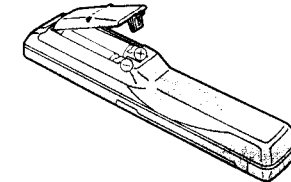
The remote controller is powered by 2 "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

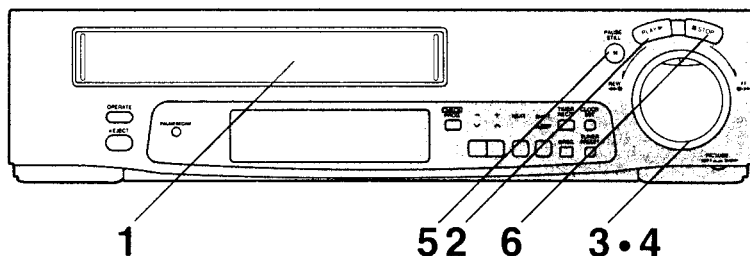
•If the display flickers when a button on the remote controller is pressed, please replace the batteries with new ones.

Precautions for battery replacement

- Load the new batteries with their polarity (+ and -) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

Loading the batteries





Operations Display Symbols

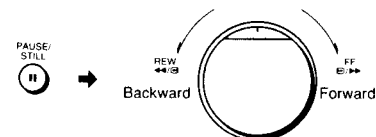
- 1 Insert a recorded cassette tape.
- 2 Start viewing the picture.
- 3 Search forward by tapping FF.
•To change back to normal playback, press PLAY.
- 4 Search backward by tapping REW.
•To change back to normal playback, press PLAY.
- 5 View a still picture.
•To advance one frame of the still picture, press STILL ADV.
•To continue the normal playback, press PLAY or PAUSE/STILL.
- 6 Stop viewing the picture.

Other Playback Functions

To change the playback speed

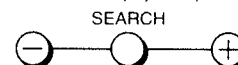
Using Shuttle Ring:

- 1 Press PAUSE/STILL.
- 2 Rotate Shuttle Ring.



Using Remote Controller:

- 1 Press SEARCH.
- 2 Press + or - repeatedly.
+: To increase the playback speed forward
-: To increase the playback speed backward



To obtain high speed picture during fast forward or rewind

Keep FF pressed during fast forward.
Keep REW pressed during rewind.



- The same operation can also be performed by turning the Shuttle Ring.

To skip scene

Press SKIP during playback.



- The following 30 seconds will be skipped.
- Each press gives a 30 seconds time span up to 4 minutes.

To return to a specified scene

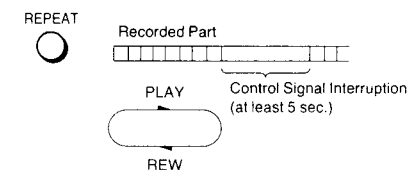
- 1 Press RESET to set the counter to 0:00.00.
- 2 After playback, press ZERO STOP in the stop mode.



- The tape will be rewound or fast forwarded to 0:00.00.

To playback a recorded part repeatedly

Press REPEAT in the stop mode.



To find the beginning of each recording

For example:

Searching for the 2nd recorded segment in the forward direction.

Press INDEX ►► twice.



- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press INDEX ◀◀.
- Up to 20 programmes can be searched for in both directions.

Recording Index Signals

Index signals are recorded in following cases.

- WRITE indicator appears on the Display.
- When a recording is started by pressing REC.
- When REC is pressed during recording.
- When timer recording is activated.

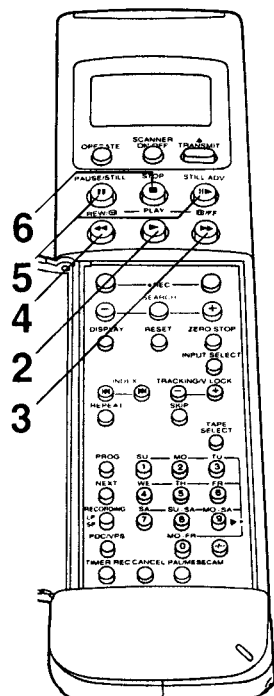
Notes:

- During Playback, set PAL/MESECAM.

PAL: When playing back a tape recorded in the PAL system.

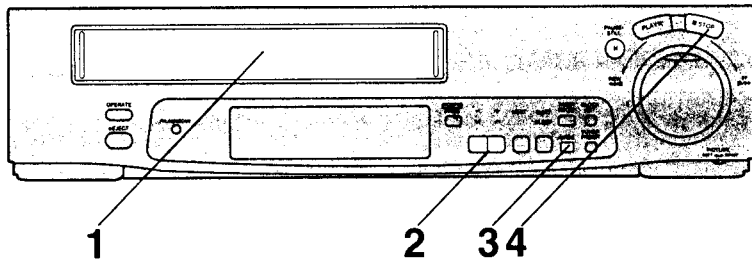
MESECAM: When playing back a tape recorded in the MESECAM system.
MESECAM Indicator lights up.

- Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.

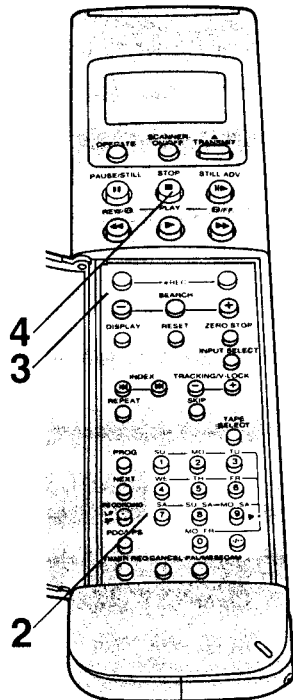


On-the-spot Recording

On-the-spot Recording



1-21



Operations	Display Symbols
1 Insert a cassette tape. • If it has already been inserted, press OPERATE to turn the VTR on.	
2 Select TV station.	
3 Start recording.	
4 Stop recording.	

To interrupt recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.



To record one TV programme while viewing another programme

- 1 Refer to the on-the-spot recording operations steps 1 to 3.
- 2 Select the TV programme on your TV set you wish to view at the present time.

To display the approximate remaining tape time

- 1 Press **TAPE SELECT** to select the corresponding cassette tape length.



E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

- 2 Press **DISPLAY**.

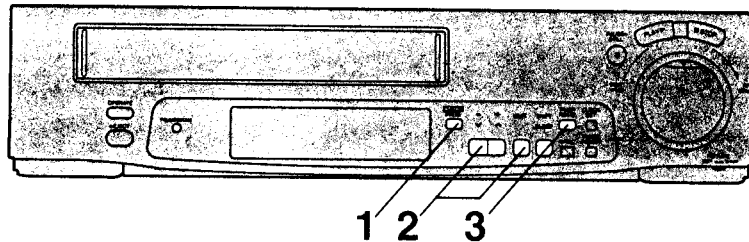


Notes:

- When a video cassette with a broken off tab is inserted, the "E260" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes, and be back to the stop mode.

Timer Recording

Timer Recording



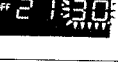
Up to 8 timer programmes can be recorded up to one month in advance by setting the timer, including daily and weekly programmes.

Preparation

Insert a cassette tape with an intact erasure prevention tab.

For Example:

Timer programme number; 1
Programme position (channel); 2
Date; 27th, October
Starting time; 20:02
Ending time; 21:30
(present date; 16th October)

Operations	Display Symbols	
1	 	Select Timer programme number "1" .
2	Set each item by pressing + or – and NEXT .	
		Set Programme position (channel) "2" .
		Set Date "27" . •For daily and weekly recording, see next page.
		Set Starting time (hour) "20" .
		Set Starting time (minute) "02" .
		Set Ending time (hour) "21" .
		Set Ending time (minute) "30" . •There is no need to press NEXT .
3	 	To activate timer recording, press TIMER REC.

Setting for Daily and Weekly Timer Recording

In the Date setting step, press – repeatedly until the desired day(day(s)) is displayed.

Daily recording

From Sunday to Saturday



From Monday to Saturday

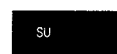


From Monday to Friday



Weekly recording

For example, Sunday



Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Euro AV socket, select the A1 indicator for the programme position.

Setting other Programmes in Succession

Repeat steps 1 and 2.

Checking a Timer Programme

Select the timer programme number to be checked by pressing **CHECK/PROG**.

Cancelling a Timer Programme

1 Release from the standby mode by pressing **TIMER REC.**

2 Select the timer programme number to be cancelled by pressing **CHECK/PROG**.

3 Press + and – simultaneously for more than 3 seconds.

VPS (Video Programme System)/PDC (Programme Delivery Control)

The Video Programme System (VPS) or the Programme Delivery Control (PDC) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news are inserted, the recording will also be interrupted automatically and resumed when the programme continues.

•Press **SHIFT** in step 2 to cancel the VPS (PDC) function.

•If the actual broadcasting times of timer recordings overlap [regardless of whether they are VPS (PDC)-controlled], the recording that starts first has always priority, and the recording of the later beginning programme will start only after the first timer recording has finished.

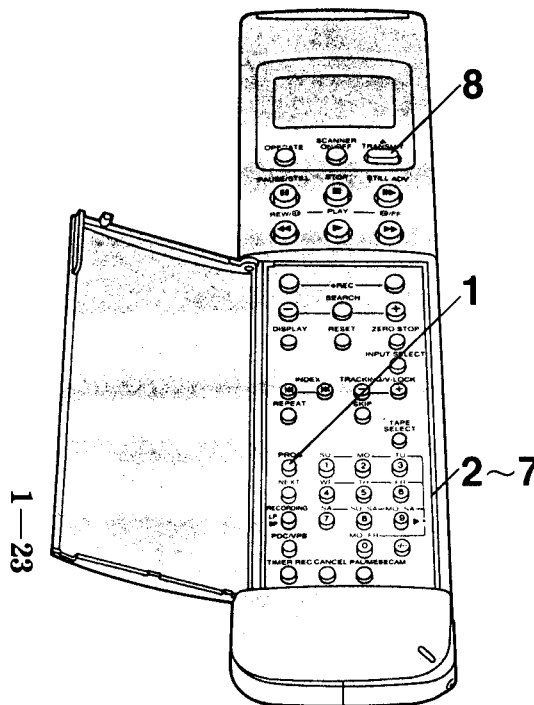
•When the VPS (PDC) signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular VPS (PDC) signal, the timer recording will be performed in the normal mode (without VPS/PDC) even if it was programmed for VPS (PDC). In this case, even if the timer recording is performed, whatever has been programmed will not be cancelled at that particular time but at 4 a.m. on the following day.

•Model NV-SD30EO is not equipped with VPS (PDC) function. The VPS (PDC) function becomes operative when the VTR is equipped with the optional VPS (PDC) decoder. Consult your authorized video dealer.

Note:

If a timer recording is not performed to the end (due to insufficient tape or cancellation by the user), the programmed timer recording data will be cancelled from the memory by 4 a.m. two days later. However, if the Timer Record Function is activated at that time, the programmed timer recording data will be cancelled at 4 a.m. the next day.

Using the Remote Controller

**For Example:**

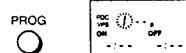
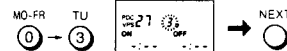
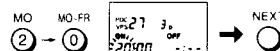
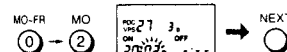
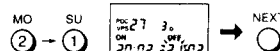
Programme position (channel): 27
 Date: 3rd, November
 Starting time: 20:02
 Ending time: 21:30
 (Present date: 16th, October)

Note:

If no operation is performed on the remote controller for more than 60 seconds, the Display turns off.

Preparation

Insert a cassette tape with an intact erasure prevention tab.

Operations**1 Press PROG.****2 Enter Programme position "27", then press NEXT.****3 Enter Date "3", then press NEXT.****4 Enter Starting time (hour) "20", then press NEXT.****5 Enter Starting time (minute) "02", then press NEXT.****6 Enter Ending time (hour) "21", then press NEXT.****7 Enter Ending time (minute) "30".****8 Press TRANSMIT.**

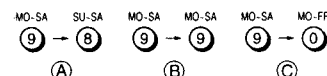
The transmitted data appears on the display of the VTR and a repeated bleep confirms the reception.

Daily Timer Recording

For this timer function, several groups of days can be selected.

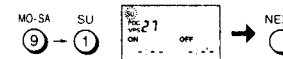
- (A) Daily recording from Sunday to Saturday
- (B) Daily recording from Monday to Saturday
- (C) Daily recording from Monday to Friday

Press the following numeric button within 5 seconds to select the group of days in step 3.

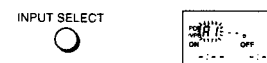
**Weekly Timer Recording**

Press the 9 button and then the numeric button within 5 seconds in step 3.

For example, SU (Sunday)

**Timer Recording from External Signal Source**

If Timer Recording is performed by a unit connected to the Euro AV socket, press **INPUT SELECT** to select the A1 indicator for the programme position.

**Turning VPS (PDC) function on and off**

Press **PDC/VPS** in any of steps 2-7.

**Checking a Timer Programme**

- The VTR must be turned on, or the timer recording indicator "TR" is lit.
- Make sure that the display of the Remote Controller is not on.

Press **TRANSMIT** repeatedly until the desired timer programme number is displayed.

**Cancelling a Timer Programme**

- 1 Press **TRANSMIT** repeatedly until the desired timer programme number is displayed.



- 2 Press **CANCEL**.

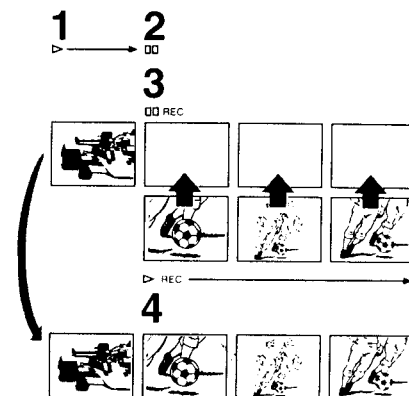
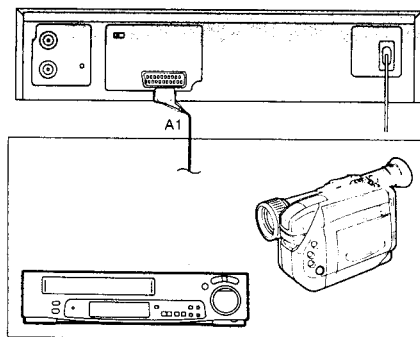


Editing

Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

This enables you to record a new segment immediately after a previously recorded segment.



Operations

- 1 Search for the end of the previous recording.



- 2 Press PAUSE/STILL at the end point.



- 3 Set for the new recording by pressing REC.

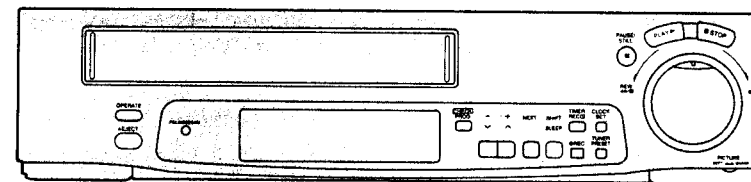


- 4 Start the new recording by pressing PAUSE/STILL again.



Other Functions

Editing
Other Functions



Automatic VTR off at time setting

Press SLEEP for the desired time.



- Each press gives a 30 minutes time span up to 9 hours.
- To cancel the setting time, press SLEEP repeatedly to set 0:00.

Other Automatic Functions

Automatic Playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off Playback

When the VTR is off, an inserted cassette can be played back by pressing PLAY.

Automatic Rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic Switching Off and Ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing EJECT. The VTR will eject the cassette and automatically turn itself off again.

Bar Code Operation

Bar Code Operation

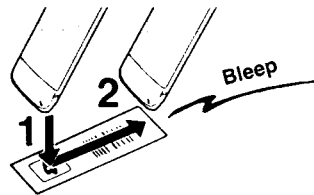
Scanner Preparation

Operating the Remote Controller

Press **SCANNER ON/OFF** to turn it on.

If the remote controller is not operated within 60 seconds (within 4 minutes when setting the clock time), the lamp and Display turns off.

How to use the Scanner



When the Bar Codes Cannot be Read

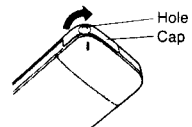
Although the lamp in the tip of the Bar Code Reading Section lights up:

- No figures appear in the Display

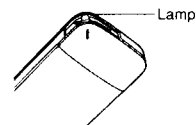
- No bleep sounds is heard;

The tip of the Bar Code Reading Section is probably clogged with dirt.

1 Remove the cap.



2 Gently wipe the tip of the lamp with a soft cloth.



Setting the Clock

Read in the following data successively by tracing bar codes 1 to 6 on the programming sheet.

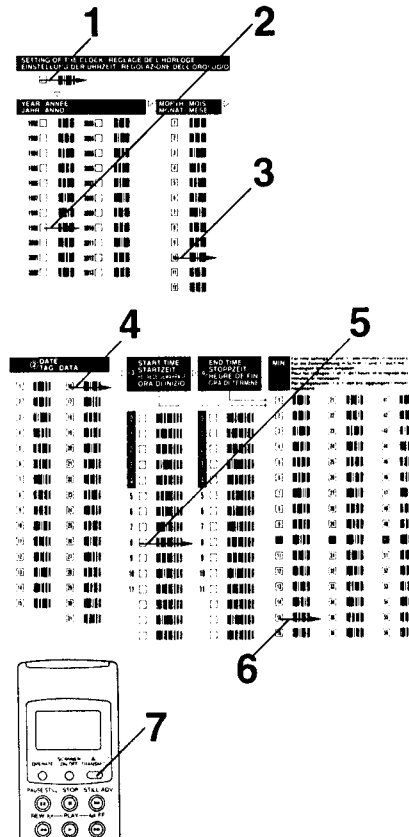
Preparation

Turn on the VTR and the remote controller.

For Example:

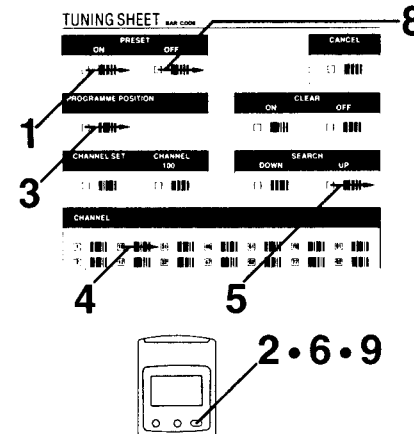
Date: 16th, October 1999

Time: 8:15



Storing TV Broadcasts

Read in the required data successively by tracing the bar codes on page 91.



Preparation

Turn on the VTR and the Remote Controller.

Operations

1 Trace the bar code "PRESET ON".

- If no operations are performed within more than 4 minutes, the Digital Scanner will automatically turn itself off.

2 Press **TRANSMIT** to transmit to the VTR.

3 Trace the bar code "PROGRAMME POSITION".

4 Trace the bar code for the programme position (channel) that you want to tune to a station.

5 Trace the bar code "SEARCH UP" or "SEARCH DOWN".

6 Press **TRANSMIT** to transmit to the VTR.

- The channel will be tuned automatically.

- At every push of the button, the next channel will be tuned.

7 Press **PAL/MESECAM** to select SECAM system so that MESECAM indicator is lit on the VTR Display.

8 Trace the bar code "PRESET OFF".

9 Press **TRANSMIT**.

Notes:

- If you make a mistake in the above operation steps, trace the bar code "CANCEL" and start again from step 4.

- When setting more than 2 channels, repeat the steps 3-7 above.

Setting the Tuner Directly

Perform the operation steps 1-4.

5 Trace the bar code "CHANNEL SET".

6 Trace the number of the channel for the TV station that you want to tune.

- When tuning a TV station in the hyperband, trace the bar code "CHANNEL 100~" and then trace the bar code "CHANNEL".

Press **TRANSMIT** to transmit to the VTR.

Perform the operation steps 7-9.

If you want to tune further TV stations, repeat the steps 3 to 7.

Blanking of Unoccupied Programme Positions

Perform the operation steps 1-3.

4 Trace the bar code for the programme position that you want to blank so that it will be skipped during Up/Down selection of the programme position.

5 Trace the bar code "CLEAR ON".

6 Press **TRANSMIT** to transmit to the VTR.

7 Trace the bar code "PRESET OFF".

8 Press **TRANSMIT**.

Cancelling the Clear Function (Blanking)

Perform the operation steps 1-3 above.

4 Trace the bar code for the programme position that has been blanked until now.

5 Trace the bar code "CLEAR OFF".

Perform the operation steps 6-8 above.

- To programme a timer recording or the set the clock time immediately after setting the tuner in the VTR by using the Remote Controller, first press **SCANNER ON/OFF** on the Remote Controller to turn it off, before starting the above operation.

Timer Recording

Successively scan the data for the programme position (channel), day, starting time and ending time by tracing bar codes 1 to 6 on the programming sheet.

Preparation

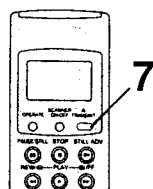
Turn on the remote controller.

For Example:

Programme position (channel); 4
Date; 3rd, November
Starting time; 8:02
Ending time; 9:30
(Present date; 16th, October)

1—26

① CHANNEL / CHAÎNE PROGR. PLATZ / CANALE												② DATE TAG / DATA												③ START TIME STARTZEIT HEURE DE DÉPART ORA DI INIZIO												④ END TIME STOPPZEIT HEURE DE FIN ORA DI TERMINE												⑤ MIN.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60



Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Euro AV socket, the A1 bar code in the CHANNEL column must be traced in the step 1.



Daily and Weekly Timer Recording

In the step 2, trace the bar code for:

Daily

Sunday to Saturday

(SU~SA)



Monday to Friday

(MO~FR)



Monday to Saturday

(MO~SA)



Weekly

For example:
Sunday

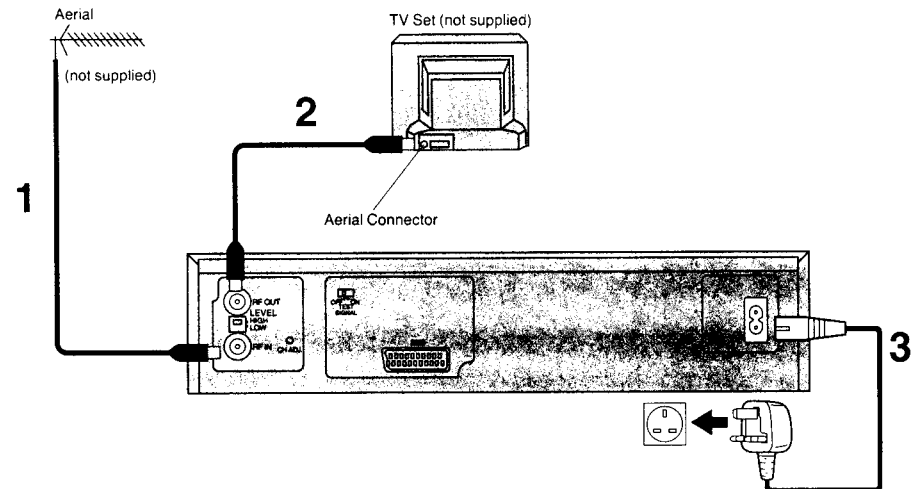
EVERYWEEK
WÖCHENTLICH
HEBDOMADAIRE
SETTIMANALE



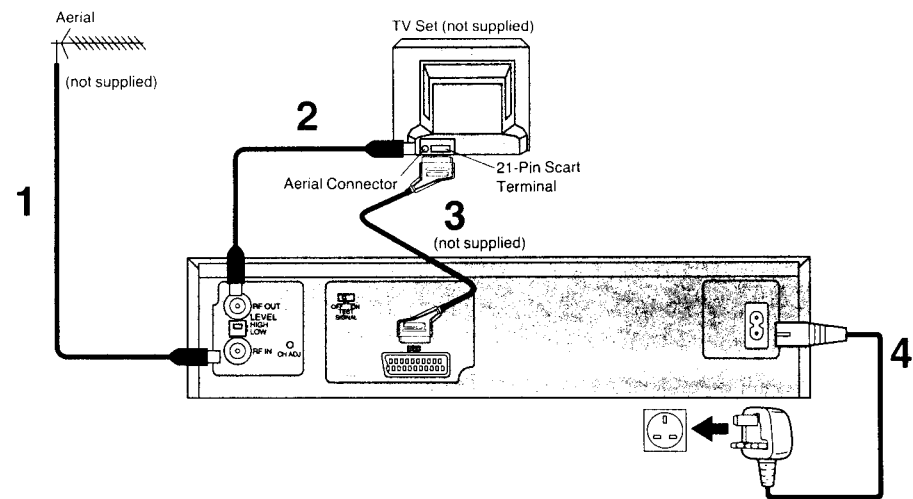
Connections

Basic Connections

The following connections are required to record and play back the VTR through a TV set:

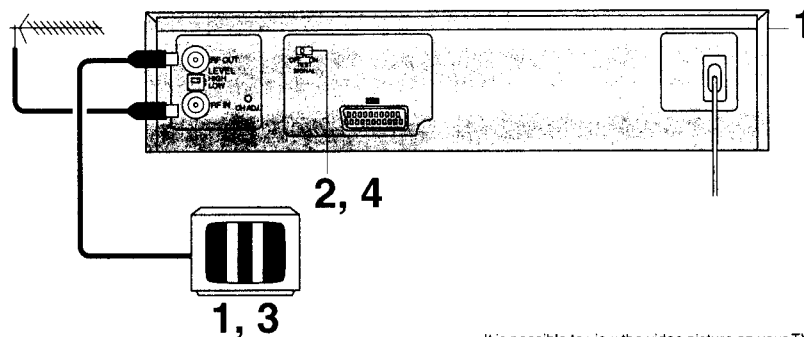


Connection to a TV Set with 21-Pin Scart Terminal



Tuning the TV to your VTR

Connections
Tuning the TV to your VTR



It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VTR to the TV through the 21-pin scart terminal, then you do not need to follow the procedure mentioned below.

Operations

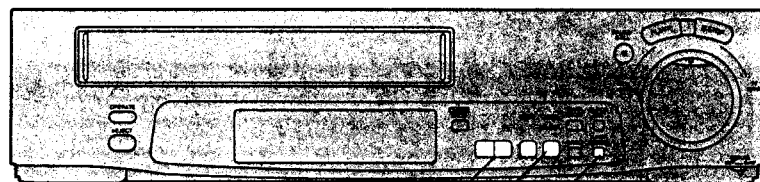
- 1  Turn on the TV and VTR.
- 2  To generate a test pattern, set **TEST SIGNAL** to ON.
- 3  Set the TV to an unused position which you wish to use for your video playback.
• Tune the TV until the test pattern appears on the screen.
- 4  Set **TEST SIGNAL** to OFF.

Note:
The test signal is transmitted on channel 36 of the UK broadcasting channels. If you are encountering interference from another broadcast on the video channel, you may readjust to a free channel by using the **CH ADJ.** screw which is located on the rear of the VTR.

Please note that if the **CH ADJ.** screw is used then you will have to retune your TV to the test signal as in item 2 to 4 above.

Storing TV Broadcasts into your VTR

Storing TV Broadcasts into your VTR



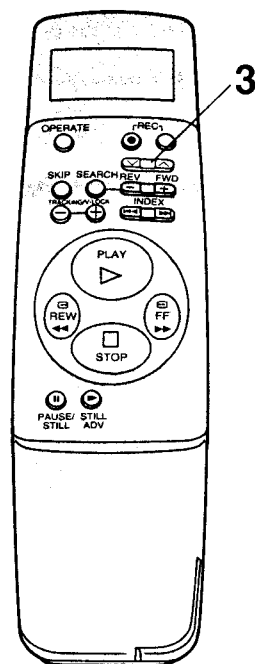
2 4 1, 5

Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and select the programme position except A1.
- Install the batteries in the remote controller. See page 20.



1—28

Operations

Display Symbols

- 1 TUNER PRESET**
Keep **TUNER PRESET** pressed until a bleep sound is heard.
- 2 - +**
Search for the TV Station.
• If the required station is not displayed, press + or - again.
- 3**
Select the programme position.
- 4 SHIFT**
Memorize the broadcast station.
• To memorize the other stations, repeat steps 2 to 4.
- 5 TUNER PRESET**
Press **TUNER PRESET**.

Note:

While tuning, your video may lock onto several weak stations from distant transmitters. Should this occur press + or - again until a strong station is received.

Channel Plan

It is recommended that you set the Programme Positions on the VTR to match the remote controller setting, so when using the Video Plus+ programming the correct broadcast station is recorded.

The table below shows the correct setting.

Programme position	TV station
1	BBC1
2	BBC2
3	ITV
4	Channel 4
A1, 5~20	*Satellite input

*Satellite input

To receive satellite stations, the satellite receiver must be connected to the VTR and programme position must be set depending on the type of the connection made.

- A1: When the satellite receiver is connected to the AV1 socket.
- 5~20: When the satellite receiver is connected by means of the RF coaxial cable. Follow the tuning procedure on page 10.
- A2: No function.

Tuning Procedure on the VTR

Stations can be tuned in by following the steps given below.

- 1 Press **TUNER PRESET** until a bleep sound is heard.
- 2 Search for the TV station by pressing + or -, and then press **NEXT**.
- 3 Select programme position by using + or -.
- 4 Press **SHIFT** to memorize the broadcast station.
• To memorize the other stations, press **NEXT** and then repeat steps 2 to 4.
- 5 Press **TUNER PRESET**.

Setting the Satellite Position on the Remote Controller

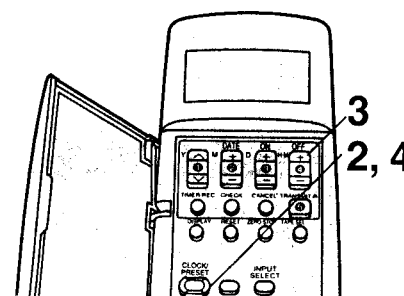
The remote controller must be set to the selected programme position for the satellite receiver, in order to record satellite stations using Video Plus+ programming.

Note:

A satellite receiver cannot be operated using this unit's remote controller.

Preparation

Set the clock of the remote controller first. See page 12.



Operations

Display Symbols

- 1 Open the door of the remote controller.
- 2 Keep **CLOCK/PRESET** pressed for 2 seconds or more and then press it again.
- 3 Select A1 or 5~20.
- 4 Press **CLOCK/PRESET**.
- 5 Close the door of the remote controller.

Setting the Clock of the VTR

Setting the Clock of the VTR

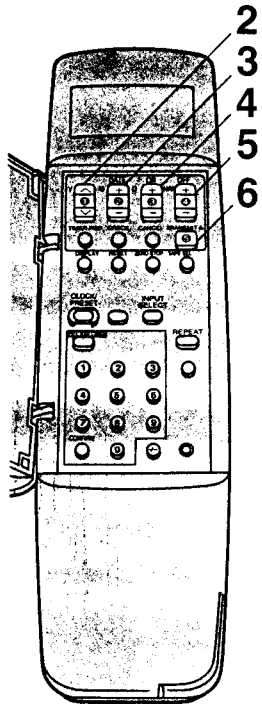
By setting the time on the remote controller's clock and then by transmitting this setting to the VTR, the clocks on both the remote controller and VTR display the same time. The built-in digital clock employs the 24-hour system.

Preparation

- Turn on the VTR.
- Install the batteries in the remote controller. See page 20.

For Example:

Date: 16th, October, 1999
Time: 20:15

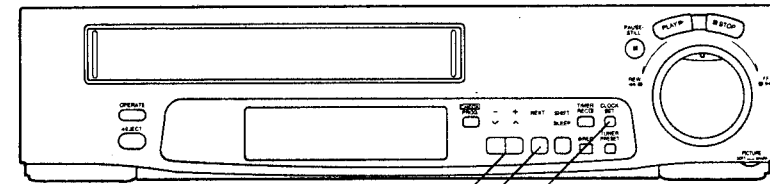


1—29

Operations	Display Symbols	
1		Open the door of the remote controller.
2		Set Year "99".
3		Set Month "10".
4		Set Date "16".
5		Set Time "20:15". • When it is kept pressed, the indication changes in 30-minute steps.
6		Press TRANSMIT.
7		Close the door of the remote controller.

Note:

To change the previous clock setting, press **CLOCK/ PRESET** for at least 2 seconds. The previous clock setting will be displayed then follow steps 2 to 7 above.



In addition to setting the VTR clock from the remote controller, it can also be set directly from the VTR.

Preparation

Turn on the VTR.

2 1, 3

For Example:

Date: 16th, October, 1999
Time: 20:15

Operations	Display Symbols	
1		Keep CLOCK SET pressed until a bleep sound is heard.
2		Set Year "99".
		Set Month "10".
		Set Date "16".
		Set Hour "20".
		Set Minute "15". • There is no need to press NEXT .
3		Press CLOCK SET . • The clock will start.

Time Reset Function

If the clock is less than two minutes slow or fast, it can easily be reset to the proper time.

For example: Resetting the clock to 12:00.00.

1 Press **CLOCK SET** at any time between 11:58.00 and 12:01.59 until the beep sound is heard.

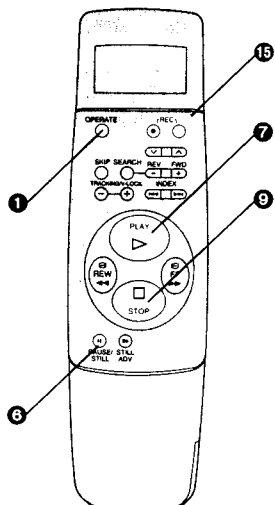
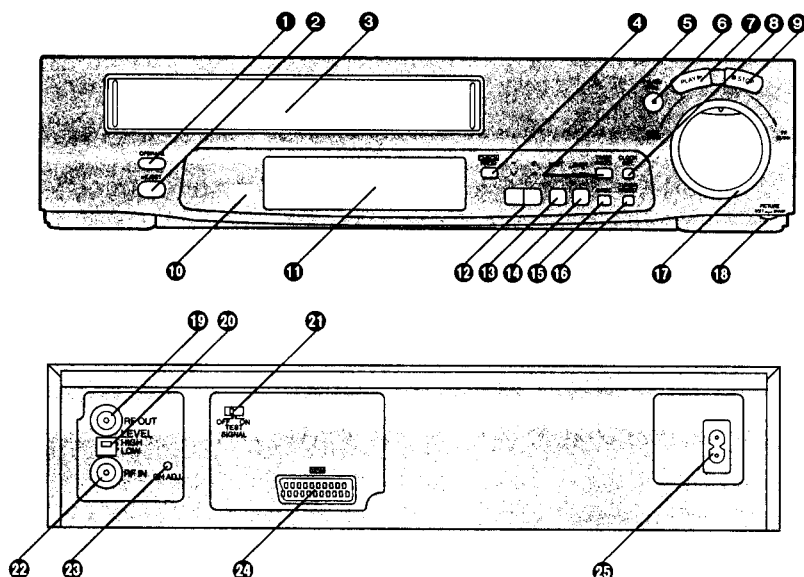
2 Press **CLOCK SET** again as soon as you hear the 12:00.00 time signal.

Note:

The clock operates for at least 60 minutes by its backup system in the event of power failure.

Controls and Connection Sockets

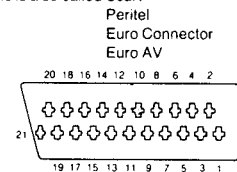
Controls and Connection Sockets



- 1 OPERATE**
To turn the VTR on and off.
- 2 EJECT**
To eject a video cassette.
- 3 Cassette Compartment**
Insert a video cassette here.
- 4 CHECK/PROG**
To select a timer programme number.
"1, 2, 3... or 8" is lit.
To display details of preset timer recording.
- 5 TIMER REC**
To turn the timer recording function on and off.
[] is lit or not lit.
Once activating timer recording function, the normal VTR operation is not possible unless this button is set off.
- 6 PAUSE/STILL**
During playback: Still picture.
During recording: To interrupt recording.
- 7 PLAY**
To start playback. "[>]" is lit.
- 8 CLOCK SET**
To set the time.
- 9 STOP**
To stop any playback or recording.

- 10 Infra-red Remote Control Receiver Window**
- 11 Display**
- 12 V +/- +**
To select the required programme position (TV station).
To set the clock and timer recording.
- 13 NEXT**
To proceed to the next item during setting procedure.
- 14 SLEEP/SHIFT**
To set the time to turn off the VTR automatically.
To memorize programme position.
- 15 REC**
To start a recording.
- 16 TUNER PRESET**
To initiate TV station settings for the tuner.
- 17 Shuttle Ring**
In the stop mode: To rewind or fast forward the tape.
In the playback mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.
- 18 PICTURE**
To make picture sharper (SHARP) or softer (SOFT).
- 19 RF OUT**
To connect to the aerial terminal on a TV set.
- 20 LEVEL**
Used to adjust the UHF aerial signal strength.
HIGH: For normal position.
LOW: If a diagonal pattern or stripes appear on the picture.
- 21 TEST SIGNAL**
The test signal is transmitted on channel 36.
- 22 RF IN**
To connect to the external aerial.
- 23 CH ADJ.**
To adjust the RF transmitting channel 30~42.

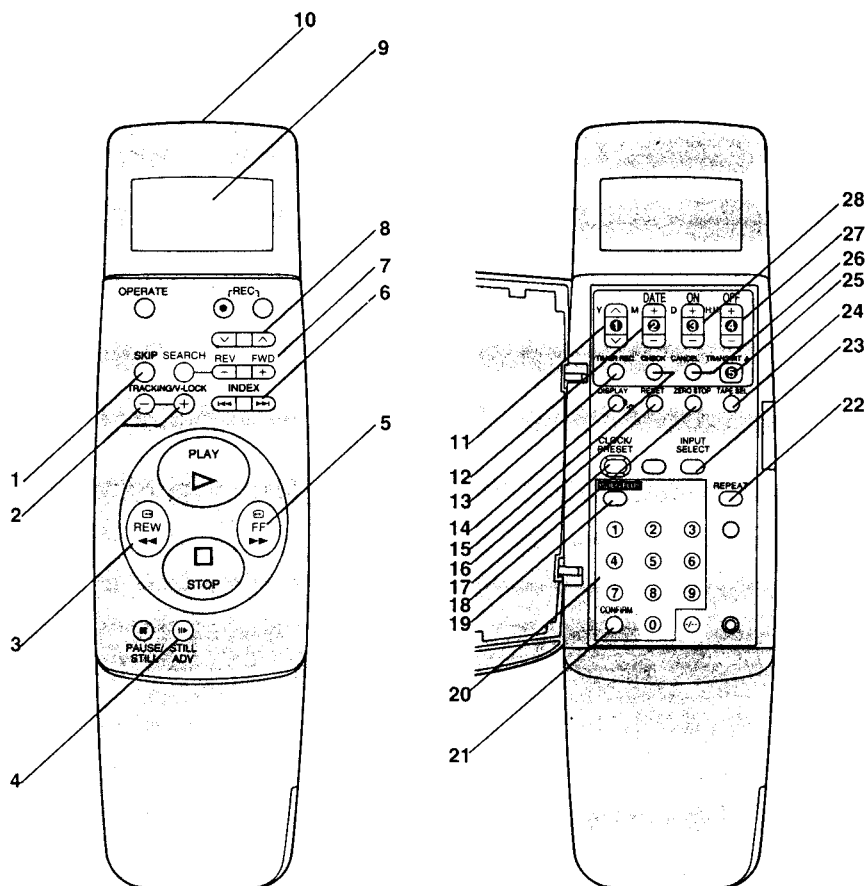
- 24 AV1**
This 21-pin scart terminal carries input and output signals for both picture and sound. TV sets equipped with a similar socket can be connected here.
This is also called Scart



- | | |
|----------------|---------------------|
| 1 AUDIO OUTPUT | 8 SWITCHING VOLTAGE |
| 2 AUDIO INPUT | 17 VIDEO GROUND |
| 3 AUDIO OUTPUT | 19 VIDEO OUTPUT |
| 4 AUDIO GROUND | 20 VIDEO INPUT |
| 6 AUDIO INPUT | 21 GROUND |

No connection: 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 18

- 25 AC IN~**
To connect to the main power supply.



1 SKIP

To start cue playback in 30 seconds interval during playback.
 • Each press gives a 30 seconds time span up to 4 minutes.

2 TRACKING/V-LOCK

For manual tracking adjustment
 The + and - buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment
 When noise bars appear during Still, Still Advance or Slow playback, switch over to slow playback and adjust with the "+" or "-" button to reduce the noise bars.

For vertical locking adjustment
 Use the + and - buttons to minimize any vertical jitter during still-picture playback.

3 REW (REWIND)

In the stop mode: To rewind the tape.
 In the playback mode: To search backward.
 In the rewind mode: To obtain high speed picture. " $\ll$ " is lit.

4 STILL ADV

To advance a still picture during still playback.

5 FF (FAST FORWARD)

In the stop mode: To fast forward the tape.
 In the playback mode: To search forward.
 In the fast forward mode: To obtain high speed picture. " $\gg$ " is lit.

6 INDEX

For the index search function.

7 SEARCH

To adjust the playback speed backward or forward.

8 V Δ

To select the required programme position (TV station).

9 Display

10 Infra-red Transmitter

The programming data are transmitted from here to the VTR.

11 Δ V (Y)

• To programme a timer recording.
 • To set the clock.

12 DATE (M)

• To programme a timer recording.
 • To set the clock.

13 TIMER REC

To turn the timer recording function on and off.
 [] is lit or not lit.

14 DISPLAY

To change the indication on the VTR Display.

→ Clock → Counter → Remaining Tape Time

15 CHECK

To check timer programmes.

16 RESET

To reset the tape counter (elapsed time) to "0:00.00".
 • The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

17 CLOCK/PRESET

• To set the clock.
 • To set the satellite position.

18 ZERO STOP

For the zero stop function.

19 VIDEO PLUS

To programme a Video Plus+ PlusCode.

20 Programme Position Selector Buttons

• To select the programme positions.

9: 9
 19: 19 → 1 → 9

• To enter a PlusCode.

21 CONFIRM

To convert the data of a PlusCode.

22 REPEAT

For the repeat playback function.

23 INPUT SELECT

To select the "A1" external recording source.

24 TAPE SEL

To set the cassette tape length in order to obtain correct indication of the remaining tape time.
 E195: For E30, -60, -80, -120, -180 and -195 tapes.
 E240: For E240 tape.
 E260: For E260 tape.

25 TRANSMIT

To transmit the data that has been set on the remote controller to the VTR.

26 CANCEL

To cancel the settings made for a timer recording.

27 OFF (H:M)

• To programme a timer recording.
 • To set the clock.
 • To set the satellite position.

28 ON (D)

• To programme a timer recording.
 • To set the clock.

Power Source for the Remote Controller

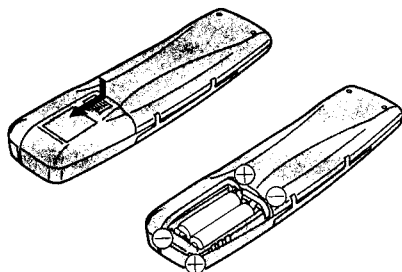
The remote controller is powered by 2 "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

- When whatever appears on the display becomes faint, please replace the batteries with new ones.

Precautions for Battery Replacement

- Load the new batteries with their polarity (+ and -) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

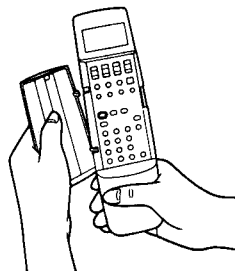
Installing the Batteries



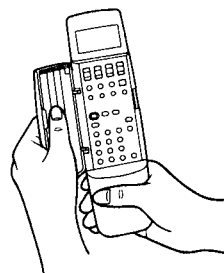
How to refit the Remote Controller Door

If the door of the remote controller is forced to open too much, it may come off. In this case, please follow the steps below.

- 1 Refit the lower part of the door.

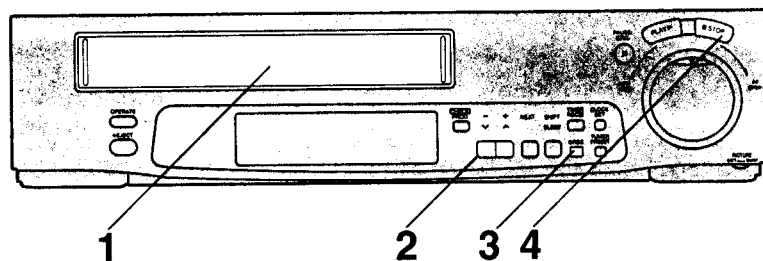


- 2 Insert the upper part of the door until it locks with a click.

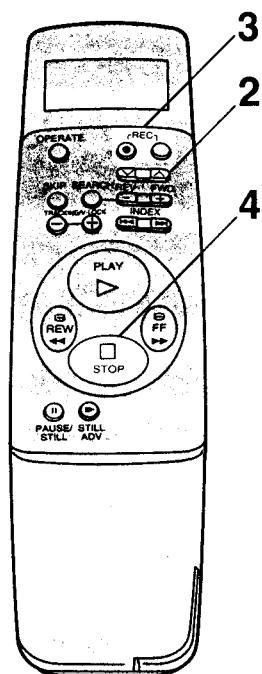


On-the-spot Recording

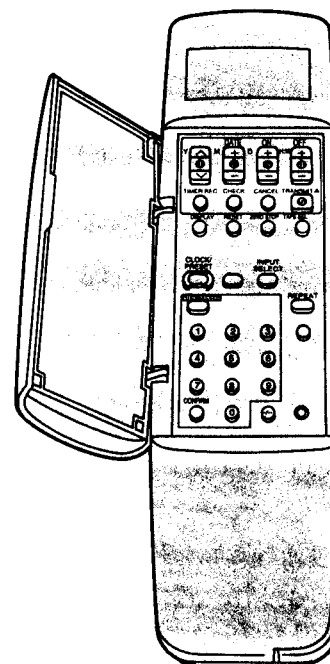
On-the-spot Recording



1—33



Operations	Display Symbols	
1 		Insert a cassette tape. • If it has already been inserted, press OPERATE to turn the VTR on.
2 		Select TV station.
3 		Start recording.
4 		Stop recording.



To interrupt Recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.



To record One TV Programme while Viewing Another Programme

- 1 Refer to the on-the-spot recording operations steps 1 to 3.
- 2 Select the TV programme on your TV set you wish to view at the present time.

To display the Approximate Remaining Tape Time

- 1 Press **TAPES SEL** to select the corresponding cassette tape length.



E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

- 2 Press **DISPLAY**.

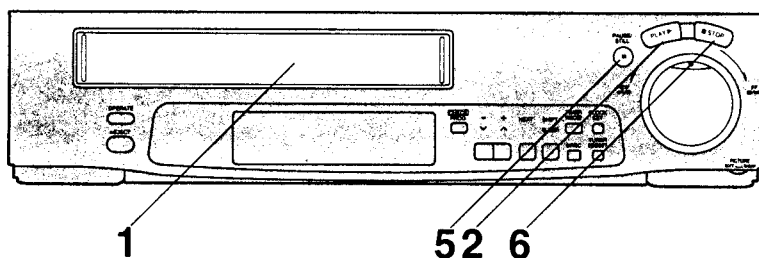


Notes:

- When a video cassette with a broken off tab is inserted, the "E195" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes, and be back to the stop mode.

Playback

Playback



Operations Display Symbols

- 1   Insert a recorded cassette tape.
- 2   Start viewing the picture.
- 3   Search forward by tapping FFW.
• To change back to normal playback, press PLAY.
- 4   Search backward by tapping REW.
• To change back to normal playback, press PLAY.
- 5   View a still picture.
• To advance one frame of the still picture, press STILL ADV.
• To continue the normal playback, press PLAY or PAUSE/STILL.

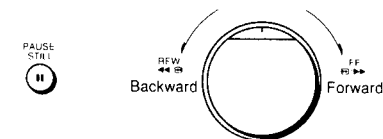
- 6  Stop viewing the picture.

Other Playback Functions

To change the Playback Speed

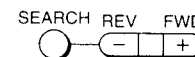
Using Shuttle Ring:

- 1 Press PAUSE/STILL.
- 2 Rotate Shuttle Ring.



Using Remote Controller:

- 1 Press SEARCH.
- 2 Press FWD or REV repeatedly.
FWD: To increase the playback speed forward
REV: To increase the playback speed backward



To obtain High Speed Picture during Fast Forward or Rewind

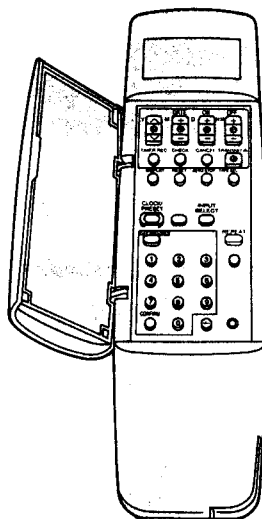
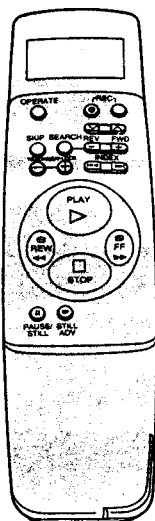
Keep FF pressed during fast forward.
Keep REW pressed during rewind.



• The same operation can also be performed by turning the Shuttle Ring.

Note:

Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.



To Skip Scene

Press **SKIP** during playback.



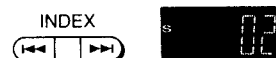
- The following 30 seconds will be skipped.
- Each press gives a 30 seconds time span up to 4 minutes.

To find the Beginning of Each Recording

For example:

Searching for the 2nd recorded segment in the forward direction.

Press **INDEX** **▶▶** twice.



- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press **INDEX** **◀◀**.
- Up to 20 programmes can be searched for in both directions.
- When the incorrect numerical data has been entered, press **STOP** and enter the correct data.

Recording Index Signals

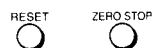
Index signals are recorded in following cases.

WRITE indicator appears on the Display.

- When a recording is started by pressing **REC**.
- When **REC** is pressed during recording.
- When timer recording is activated.

To return to a Specified Scene

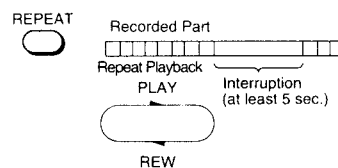
- 1 Press **RESET** to set the counter to 0:00.00.
- 2 After playback, press **ZERO STOP** in the stop mode.



- The tape will be rewound or fast forwarded to 0:00.00.

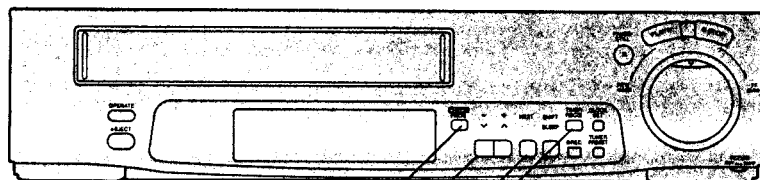
To playback a Recorded Part repeatedly

Press **REPEAT** in the stop mode.



Timer Recording

Timer Recording



For Example:

Timer programme number; 1
Programme position (channel); 2
Date; 27th, October
Starting time; 20:02
Ending time; 21:30
(present date; 16th October)

Preparation

Insert a cassette tape with an intact erasure prevention tab.

Operations

Display Symbols

1			Select Timer programme number "1".
2			Set each item by pressing + or - and NEXT.
			Set Programme position (channel) "2".
			Set Date "27". •For daily and weekly recording, see next page.
			Set Starting time (hour) "20".
			Set Starting time (minute) "02".
			Set Ending time (hour) "21".
			Set Ending time (minute) "30". •There is no need to press NEXT.
3			To activate timer recording, press TIMER REC.

Setting for Daily and Weekly Timer Recording

In the Date setting step, press - repeatedly until the desired day(days) is displayed.

Daily recording

From Sunday to Saturday

SU MO TU WE
TH FR SA

From Monday to Saturday

MO TU WE
TH FR SA

From Monday to Friday

MO TU WE
TH FR

Weekly recording

For example, Sunday

SU

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the AV1 socket, select the A1 indicator for the programme position.

Setting other Programmes in Succession

Repeat steps 1 and 2.

Checking a Timer Programme

Select the timer programme number to be checked by pressing **CHECK/PROG**.

Cancelling a Timer Programme

- 1 Release from the standby mode by pressing **TIMER REC.**
- 2 Select the timer programme number to be canceled by pressing **CHECK/PROG**.
- 3 Press + and - simultaneously for more than 3 seconds.

Note:

If a timer recording is not performed to the end (due to insufficient tape or cancellation by the user), the programmed timer recording data will be cancelled from the memory by 4 a.m. two days later.
However, if the Timer Record Function is activated at that time, the programmed timer recording data will be cancelled at 4 a.m. the next day.

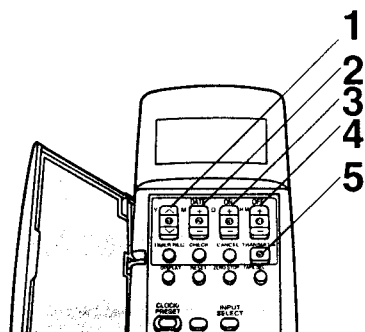
Optional Function

PDC (Programme Delivery Control)

The Programme Delivery Control (PDC) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news are inserted, the recording will also be interrupted automatically and resumed when the programme continues.

- This model is not equipped with PDC function. The PDC function becomes operative when the VTR is equipped with the optional PDC decoder. Consult your authorized video dealer.
- If the VTR is equipped with the PDC decoder, the PDC indicator lights when the correct PDC signals are transmitted from the broadcasting station.
- When the unit is set for programmed recording, the PDC indicator lights whether or not PDC signals are transmitted. This indicates that the recording has been programmed with PDC. To programme a recording without PDC, press **SHIFT**: this cancels the PDC function and turns off the PDC indicator.
- Since PDC signals are received when a recording is programmed using PDC, the power of the unit's tuner section is turned on and the programmed broadcasting is received. When a multiple number of programmes have been programmed for timer recording, all of the broadcasts concerned will be received in sequence. These broadcast pictures can be seen on the video playback channel and AV out (no sound).
- If the actual broadcasting times of timer recordings overlap (regardless of whether they are PDC-controlled), the recording that starts first has always priority, and the recording of the later beginning programme will start only after the first timer recording has finished.
- When the PDC signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular PDC signal, the timer recording will be performed in the normal mode (without PDC) even if it was programmed for PDC. In this case, even if the timer recording is performed, whatever has been programmed will not be cancelled at that particular time but at 4 a.m. on the following day.

Using the Remote Controller



For Example:

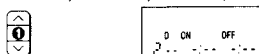
Programme position (channel): 2
 Date: 27th, October
 Starting time: 20:02
 Ending time: 21:30

Preparation

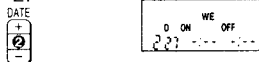
- Insert a cassette tape with an intact erasure prevention tab.
- Open the door of the remote controller.

Operations Display Symbols

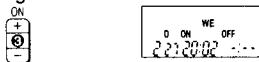
- 1 Set Programme position (channel) "2".



- 2 Set Date "27".



- 3 Set Starting time "20:02".



- When it is kept pressed, the indication changes in 30-minute steps.

- 4 Set Ending time "21:30".



- 5 Press TRANSMIT.



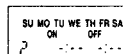
- 6 Close the door of the remote controller.

Daily Timer Recording

For this timer function, several groups of days can be selected.

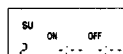
- (A) Daily recording from Sunday to Saturday
- (B) Daily recording from Monday to Saturday
- (C) Daily recording from Monday to Friday

In step 3, select the desired days by pressing "DATE --".
 For Example, (A)



Weekly Timer Recording

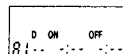
In step 3, select the desired day by pressing "DATE --".
 For example, SU (Sunday)



Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the AV1 socket, select the A1 indicator in step 1 for the programme position.

- A2: No function.



Checking a Timer Programme

- The VTR must be turned on, or the timer recording indicator "□" is lit.

Press **CHECK** repeatedly until the desired timer programme number is displayed.



Cancelling a Timer Programme

- 1 Press **CHECK** repeatedly until the desired timer programme number is displayed.

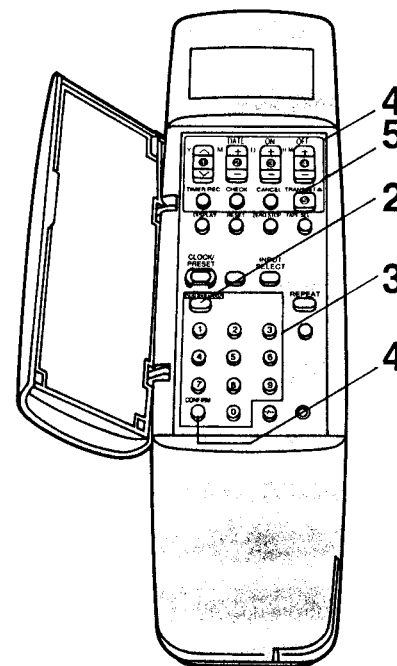


- 2 Press **CANCEL**.



Programming the Video Plus+ PlusCode

Programming is now easier than ever: simply enter the PlusCode provided in the programme schedule column carried by newspapers and magazines. PlusCodes are numbers which are assigned to each programme listed in the TV programme schedule carried in newspapers and TV guides. When these codes are entered and TRANSMIT is pressed, the codes are converted into the actual programming and sent to the VTR.

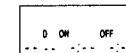


Preparation

- Insert a cassette tape with an intact erasure prevention tab.
- Set the programme positions on both the VTR and remote controller as shown on page 11.

Operations Display Symbols

- 1 Open the door of the remote controller.

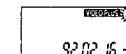


- 2 Press **VIDEO PLUS**.



- 3 Enter a PlusCode.

Example: 920216



- 4 Press **CONFIRM** to check that the code corresponds to the right programme.



- To make any corrections, use buttons 1-4.

- 5 Press **TRANSMIT**.



- 6 Close the door of the remote controller.

Notes:

- When the PlusCode is used for programming, the recording time may be slightly longer than the actual programme time.
- Repeat steps 2 to 4 if "Err" appears on the remote controller.
- When programming two or more programmes, repeat steps 2 to 5 after pressing **TRANSMIT**.
- The procedures for checking and canceling whatever has been programmed are the same as for remote control programming.

Note:

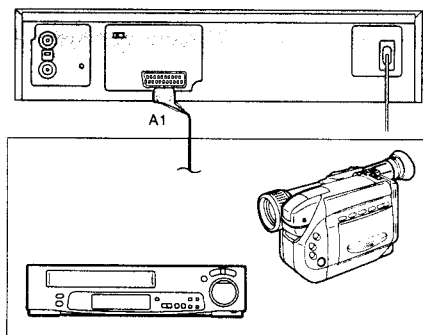
A satellite receiver cannot be operated using this unit's remote controller.

Editing

Assembly Editing

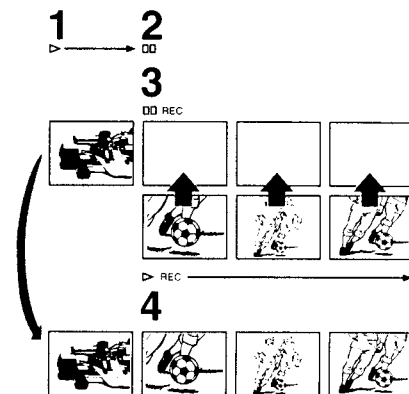
This function can be used to make up an edited tape from other recordings or video sources.

A new scene can be added to the end of a previous one.



Preparation

- Connect a movie camera or another VTR to this VTR as shown.
 - Insert a recorded cassette tape with an intact erasure prevention tab.
 - Select the video source required by pressing **INPUT SELECT** to set A1.
- A1: Through AV1 socket



Operations

- 1 Search for the end of the previous recording.



- 2 Press **PAUSE/STILL** at the end point.



- 3 Set for the new recording by pressing **REC**.

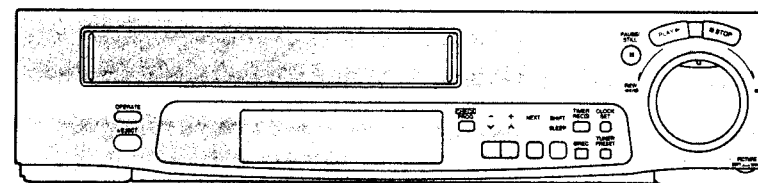


- 4 Start the new recording by pressing **PAUSE/STILL** again.



Other Functions

Editing
Other Functions



Playback of NTSC Tape

Tapes recorded in the NTSC system can be played back with this VTR via a PAL system TV set.

- NTSC is the TV broadcasting system used in U.S.A., Japan, and some other countries.

PAL is another TV broadcasting system used in U.K., Germany and many other parts of the world.

This VTR will not replay or record tapes on the SECAM broadcasting system.

NTSC 4.43 is a modified version of the PAL broadcasting system to allow most UK TV's to reproduce a colour picture when an NTSC tape is replayed on this VTR. However due to the system change, the picture may shrink, roll or not reproduce colour on some televisions.

Automatic VTR Functions

Automatic Playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off Playback

When the VTR is off, an inserted cassette can be played back by pressing **PLAY**.

Automatic Rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic Switching Off and Ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

Automatic VTR Off Time Setting

Press **SLEEP** for the desired time.

SLEEP



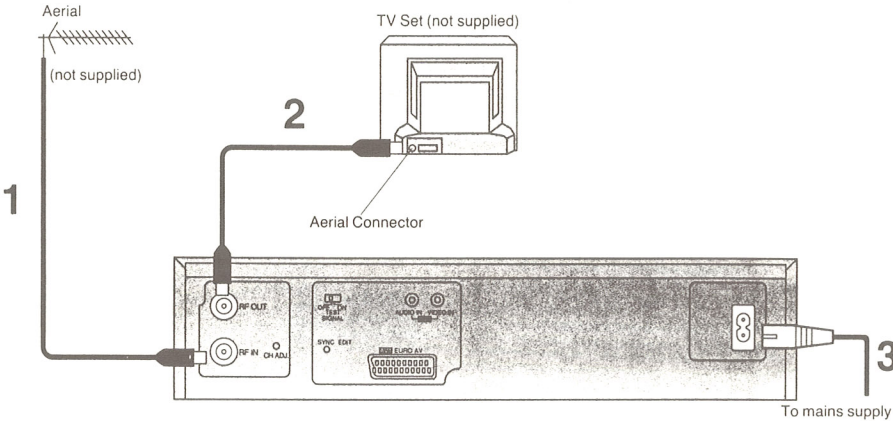
- Each press gives a 30 minutes time span up to 9 hours.
- To cancel the setting time, press **SLEEP** repeatedly to set 0:00.

Connections

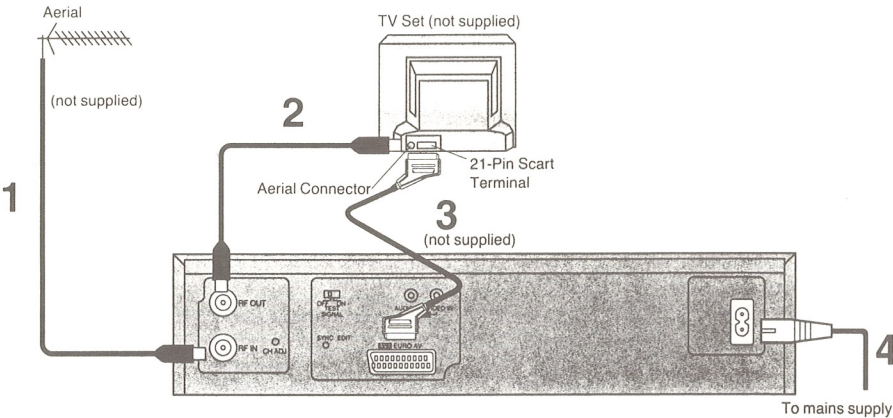
This tells you how to connect the VTR to an aerial, TV, etc.

Basic Connections

The following connections are required to record and play back the VTR through a TV set:

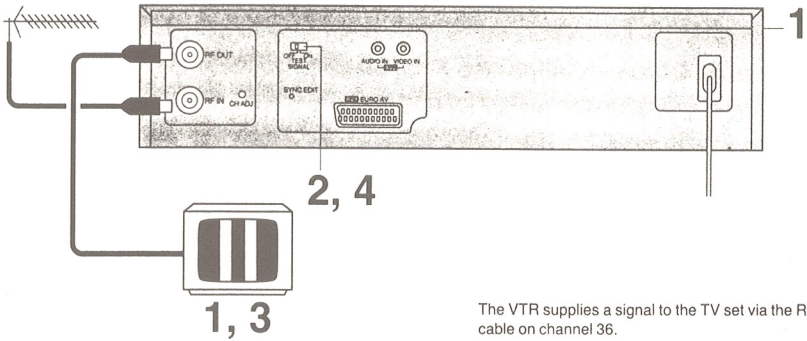


Connection to a TV Set with 21-Pin Scart Terminal



Tuning the TV to your VTR

Connections
Tuning the TV to your VTR



The VTR supplies a signal to the TV set via the RF coaxial cable on channel 36.
It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.
If you have connected the VTR to the TV through the 21-pin scart terminal then you do not need to follow the procedure mentioned below.

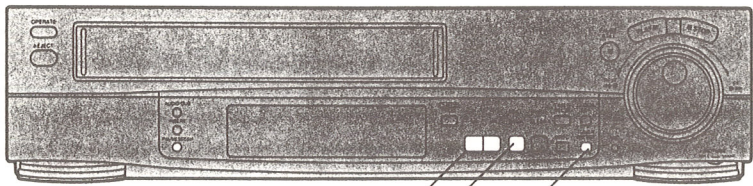
Operations

1		Turn on the TV and VTR.
2		To generate a test pattern, set TEST SIGNAL to ON.
3		Set the TV to an unused position which you wish to use for your video playback.
4		Set TEST SIGNAL to OFF.

Note:
The test signal is transmitted on video channel 36.
If you are encountering interference from a TV broadcast on this video channel, you may readjust to another free channel (32-40) by using the **CH ADJ.** screw which is located on the rear of the VTR.
Please note that if the **CH ADJ.** screw is used then you will have to retune your TV to the test signal as in item 2 to 4 above.

Storing TV Broadcasts into your VTR

Storing TV Broadcasts into your VTR



2, 3
1, 4

Introduction

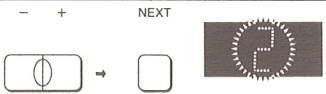
The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and select the programme position except A1 and A2.

Operations

Display Symbols

1		Keep TUNER PRESET pressed until a bleep sound is heard.
2		Select the programme position, then press NEXT .
3		Search for the required TV station. • Press PAL/MESECAM to select SECAM system so that MESECAM indicator is lit. • Press NEXT and repeat steps 2-3 for each programme position you want to tune to a station.
4		Press TUNER PRESET twice.

Fine Tuning Procedure

- 1 Press **TUNER PRESET** until a bleep sound is heard, and then press again.
- 2 Press **NEXT**.
- 3 Press + or - to obtain the best tuning condition.
 - "AFC" Indicator disappears.
 - To return the tuning to its former state, press **SHIFT**.
- 4 Press **TUNER PRESET**.

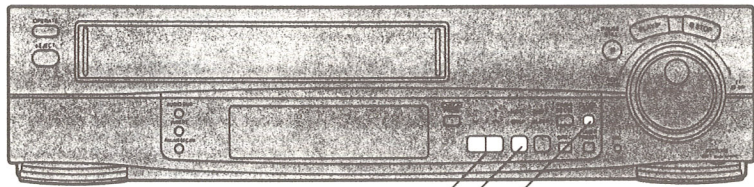
Blanking of Unoccupied Programme Positions

- 1 Press **TUNER PRESET** until a bleep sound is heard.
- 2 Select a programme position which you do not want to tune to a TV station, by using + or -.
- 3 Press **SHIFT**. ("—" is displayed.)
 - Repeat steps 2 and 3 for other unoccupied programme positions to skip during the selection of the programme positions.
 - To cancel the blanking of a programme position, select that programme position on the VTR and then press **SHIFT**.
- 4 Press **TUNER PRESET** twice.

Channel Plan

Channel Indication	TV Channel	
	Germany/Italy	Other Countries
2-12	*E2-E12	E2-E12
13-20	A-H (Only Italy)	—
21-69	21-69	21-69
74-76	—	S1-S3
80-82	—	M1-M3
83-89	S4-S10	M4-M10
90-99	S11-S20	U1-U10
121-141	S21-S41 (Only Italy)	S21-S41

*In Italy: H1...(11), H2...(12)



The built-in clock is used to activate the timer for automatic recording and must be set to the correct time.
The built-in digital clock employs the 24-hour system.

Preparation

Turn on the VTR.

For Example:

Date: 16th, October, 1999
Time: 20:15

Operations	Display Symbols	
1 		Keep CLOCK SET pressed until a bleep sound is heard.
2 Set each item by pressing + or - and NEXT .		
 		Set Year "99".
		Set Month "10".
		Set Date "16".
		Set Hour "20".
		Set Minute "15". • There is no need to press NEXT .
3 		Press CLOCK SET . • The clock will start.

Note:

The clock operates for at least 60 minutes by its backup system in the event of power failure.

Time Reset Function

If the clock is less than two minutes slow or fast, it can easily be reset to the proper time.

For example: Resetting the clock to 12:00.00.

- 1 Press **CLOCK SET** at any time between 11:58.00 and 12:01.59 until the bleep sound is heard.
- 2 Press **CLOCK SET** again as soon as you hear the 12:00.00 time signal.

Summer Time Function

Setting to summer time

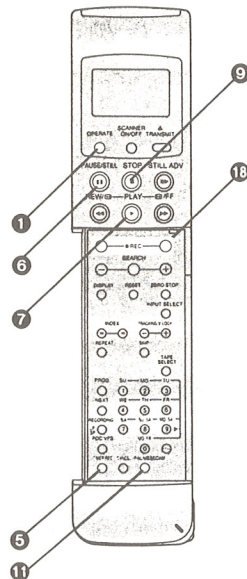
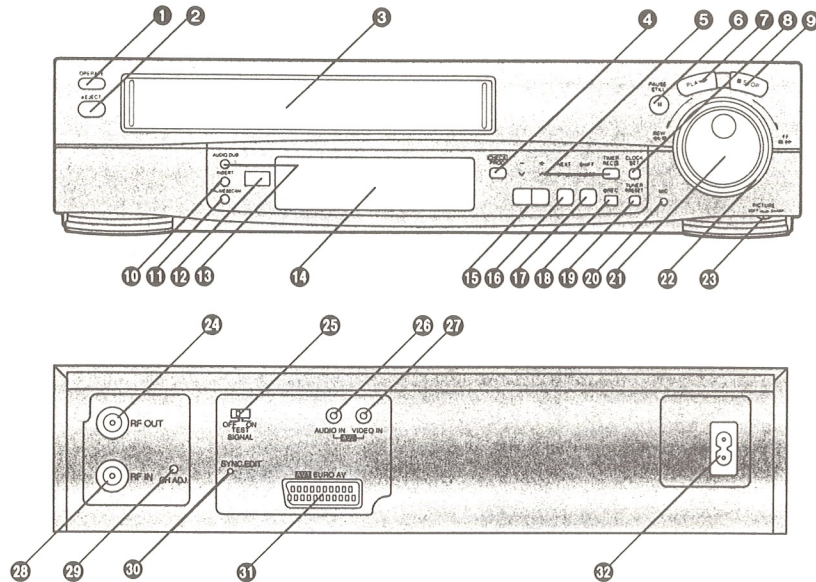
- 1 Keep **CLOCK SET** pressed until the bleep sound is heard.
- 2 Press **SHIFT**.
 - The time on the clock is advanced by 1 hour.
- 3 Press **CLOCK SET**.

Returning from summer time to standard time

- 1 Keep **CLOCK SET** pressed until the bleep sound is heard.
- 2 Press **SHIFT** twice.
 - The time on the clock is set back by 1 hour.
- 3 Press **CLOCK SET**.

Controls and Connection Sockets

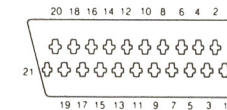
Controls and Connection Sockets



- 1 OPERATE**
To turn the VTR on and off.
- 2 EJECT**
To eject a video cassette.
- 3 Cassette Compartment**
Insert a video cassette here.
- 4 CHECK/PROG**
To select a timer programme number.
"1, 2, 3... or 8" is lit.
To display details of preset timer recording.
- 5 TIMER REC**
To turn the timer recording function on and off.
[] is lit or not lit.
Once activating timer recording function, the normal VTR operation is not possible unless this button is set to off.
- 6 PAUSE/STILL**
During playback: Still picture.
During recording: To Interrupt recording.
- 7 PLAY**
To start playback. ">" is lit.
- 8 CLOCK SET**
To set the time.
- 9 STOP**
To stop any playback or recording.

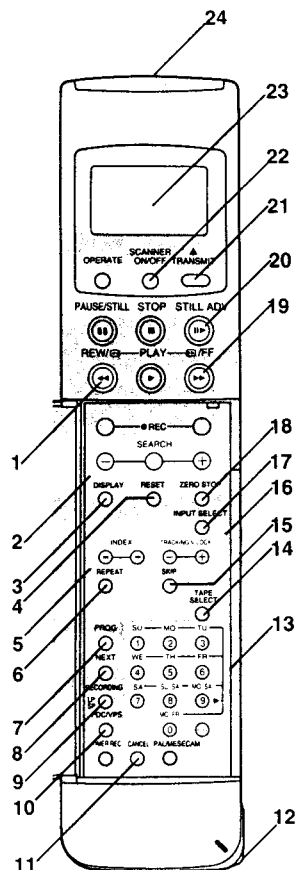
- 10 INSERT**
To set up the VTR for insert editing.
INSERT indicator lights up.
- 11 PAL/MESECAM**
Set according to the colour TV system used during recording and playback.
When the MESECAM Indicator is lit, the MESECAM system is selected.
- 12 Infra-red Remote Control Receiver Window**
- 13 AUDIO DUB**
To set up the VTR for audio dubbing.
A.DUB indicator lights up.
- 14 Display**
- 15 v /- +**
To select the required programme position (TV station).
To set the clock and timer recording.
- 16 SP/LP/NEXT**
To select the tape speed required for recording.
SP gives the best picture quality.
LP gives the longest recording time.
To proceed to the next item during setting procedure.
- 17 SLEEP/SHIFT**
To set the time to turn off the VTR automatically.
To blank unoccupied programme position.
- 18 REC**
To start a recording.
- 19 TUNER PRESET**
To initiate TV station settings for the tuner.
- 20 MIC**
To connect a microphone for recording.
- 21 Jog Dial**
To locate any desired frame with utmost precision.
- 22 Shuttle Ring**
In the stop mode: To rewind or fast forward the tape.
In the playback mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.

- 23 PICTURE**
To make picture sharper (SHARP) or softer (SOFT).
- 24 RF OUT**
To connect to the aerial terminal on a TV set.
- 25 TEST SIGNAL**
The test signal is transmitted on channel 36.
- 26 AUDIO IN (AV2)**
To connect an audio cable to a video camera or another video recorder.
- 27 VIDEO IN (AV2)**
To connect a video cable to a video camera or another video recorder.
- 28 RF IN**
To connect to the external aerial.
- 29 CH ADJ.**
To adjust the RF transmitting channel 32-40.
- 30 SYNC. EDIT**
Connecting to a Movie Camera equipped with Synchro Edit Function.
- 31 EURO AV (AV1)**
This 21-pin scart terminal carries input and output signals for both picture and sound. TV sets equipped with a similar socket can be connected here.



- | | |
|----------------|---------------------|
| 1 AUDIO OUTPUT | 8 SWITCHING VOLTAGE |
| 2 AUDIO INPUT | 17 VIDEO GROUND |
| 3 AUDIO OUTPUT | 19 VIDEO OUTPUT |
| 4 AUDIO GROUND | 20 VIDEO INPUT |
| 6 AUDIO INPUT | 21 GROUND |
- No connection; 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 18

- 32 AC IN~**
To connect to the main power supply.



1 REW (REWIND)

In the stop mode: To rewind the tape.
In the playback mode: To search backward.
In the rewind mode: To obtain high speed picture.
"◀◀" is lit.

2 SEARCH

To adjust the playback speed backward or forward.

3 DISPLAY

To change the indication on the VTR Display.

◀Clock→Counter→Remaining Tape Time→

4 RESET

To reset the tape counter (elapsed time) to "0:00.00".
•The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

5 INDEX

For the index search function.

6 REPEAT

For the repeat playback function.

7 PROG

For timer recording by using the remote controller.

8 NEXT

To proceed to the next item during setting procedure.

9 RECORDING SP/LP

To select the tape speed desired for recording.

10 PDC/VPS

To turn the VPS or PDC function on and off.

11 CANCEL

To cancel the settings made for a timer recording.

12 Bar Code Reading Section

After the Bar Code Reader is turned on, the tip lights in red.

13 Programme Position Selector Buttons

•To select the programme positions.

MO-SA
9: 9 → SU MO-SA
19: 1 → 9

•To programme a timer recording.

14 TAPE SELECT

To set the cassette tape length in order to obtain correct indication of the remaining tape time.
E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

15 SKIP

To start cue playback in 30 seconds interval during playback.
•Each press gives a 30 seconds time span up to 4 minutes.

16 TRACKING/V-LOCK

For manual tracking adjustment
The + and - buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment

When noise bars appear during Still, Still Advance or Slow playback, switch over to slow playback and adjust with the "+" or "-" button to reduce the noise bars.

For vertical locking adjustment

Use the + and - buttons to minimize any vertical jitter during still-picture playback.

17 INPUT SELECT

To select the "A1" or "A2" external recording source.

18 ZERO STOP

For the zero stop function.

19 FF (FAST FORWARD)

In the stop mode: To fast forward the tape.
In the playback mode: To search forward.
In the fast forward mode: To obtain high speed picture.
">>>" is lit.

20 STILL ADV

To advance a still picture during still playback.

21 TRANSMIT

To transmit the data that has been set on the remote controller to the VTR.

22 SCANNER ON/OFF

To turn the Bar Code Reader on and off.

23 Display

24 Infra-red Transmitter

The programming data are transmitted from here to the VTR.

Power source for the remote controller

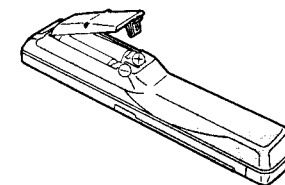
The remote controller is powered by 2 "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

•If the display flickers when a button on the remote controller is pressed, please replace the batteries with new ones.

Precautions for battery replacement

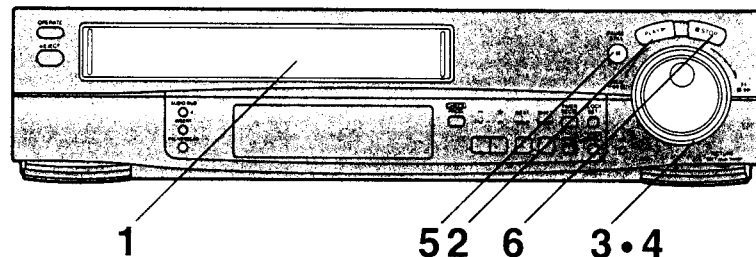
- Load the new batteries with their polarity (+ and -) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

Loading the batteries



Playback

Playback



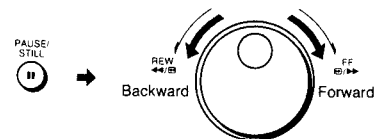
Operations Display Symbols

- 1 Insert a recorded cassette tape.
- 2 Start viewing the picture.
- 3 Search forward by tapping FF.
• To change back to normal playback, press PLAY.
- 4 Search backward by tapping REW.
• To change back to normal playback, press PLAY.
- 5 View a still picture.
• To advance one frame of the still picture, press STILL ADV.
• To continue the normal playback, press PLAY or PAUSE/STILL.
- 6 Stop viewing the picture.

Other Playback Functions

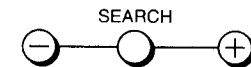
To change the playback speed

- Using Shuttle Ring:
- 1 Press PAUSE/STILL.
 - 2 Rotate Shuttle Ring.



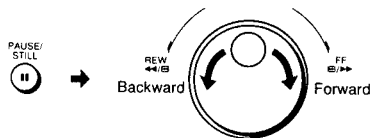
Using Remote Controller:

- 1 Press SEARCH.
- 2 Press + or - repeatedly.
+ : To increase the playback speed forward
- : To increase the playback speed backward



To locate the desired picture exactly

- 1 Press PAUSE/STILL.
- 2 Turn Jog Dial.



To obtain high speed picture during fast forward or rewind

- Keep FF pressed during fast forward.
Keep REW pressed during rewind.



- The same operation can also be performed by turning the Shuttle Ring.

To skip scene

- Press SKIP during playback.



- The following 30 seconds will be skipped.
- Each press gives a 30 seconds time span up to 4 minutes.

To return to a specified scene

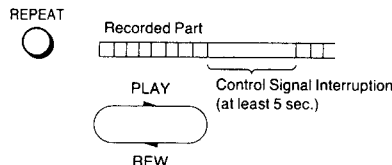
- 1 Press RESET to set the counter to 0:00.00.
- 2 After playback, press ZERO STOP in the stop mode.



- The tape will be rewound or fast forwarded to 0:00.00.

To playback a recorded part repeatedly

- Press REPEAT in the stop mode.



To find the beginning of each recording

For example:

- Searching for the 2nd recorded segment in the forward direction.
Press INDEX >>> twice.



- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press INDEX <<<.
- Up to 20 programmes can be searched for in both directions.

Recording Index Signals

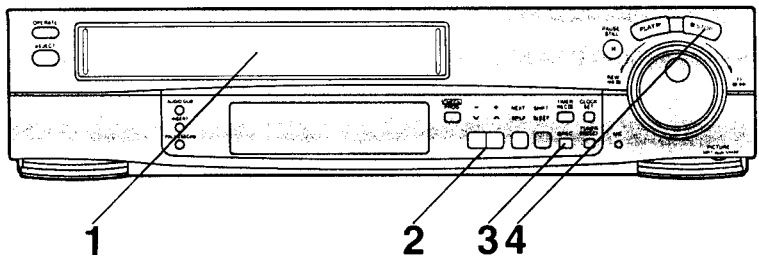
- Index signals are recorded in following cases.

WRITE indicator appears on the Display.

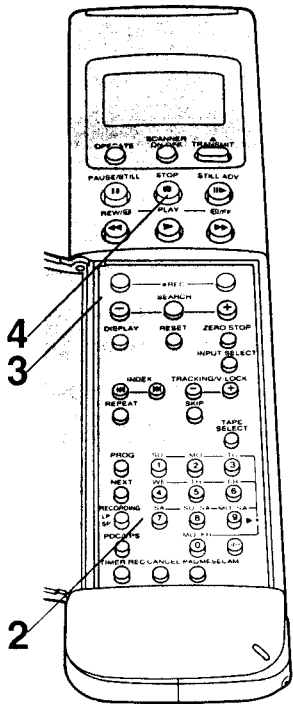
- When a recording is started by pressing REC.
- When REC is pressed during recording.
- When timer recording is activated.

Notes:

- During Playback, set PAL/MESECAM.
PAL: When playing back a tape recorded in the PAL system.
MESECAM: When playing back a tape recorded in the MESECAM system.
MESECAM Indicator lights up.
- Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.



1—45



Operations	Display Symbols
1  Insert a cassette tape. ● If it has already been inserted, press OPERATE to turn the VTR on.	
2  Select TV station.	
3  Start recording.	
4  Stop recording.	

To select the desired tape speed

Press **SP/LP** before recording.



To interrupt recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.



To record one TV programme while viewing another programme

- 1 Refer to the on-the-spot recording operations steps 1 to 3.
- 2 Select the TV programme on your TV set you wish to view at the present time.

To display the approximate remaining tape time

- 1 Press **TAPE SELECT** to select the corresponding cassette tape length.



- E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

- 2 Press **DISPLAY**.

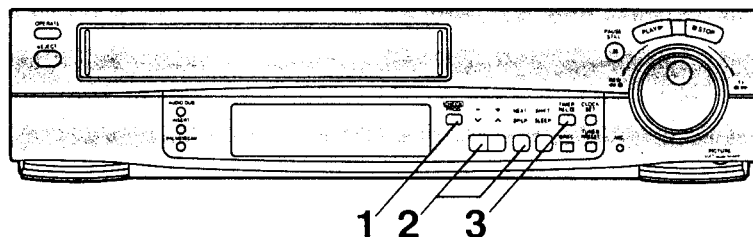


Notes:

- When a video cassette with a broken off tab is inserted, the 'E260' indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes, and be back to the stop mode.

Timer Recording

Timer Recording



Up to 8 timer programmes can be recorded up to one month in advance by setting the timer, including daily and weekly programmes.

Preparation

Insert a cassette tape with an intact erasure prevention tab.

For Example:

Timer programme number; 1
 Programme position (channel); 2
 Date; 27th, October
 Starting time; 20:02
 Ending time; 21:30
 (present date; 16th October)

Operations

Display Symbols

1			Select Timer programme number "1".
2	Set each item by pressing + or - and NEXT.		
			Set Programme position (channel) "2".
			Set Date "27". •For daily and weekly recording, see next page.
			Set Starting time (hour) "20".
			Set Starting time (minute) "02".
	NEXT		Set Ending time (hour) "21".
			Set Ending time (minute) "30". •There is no need to press NEXT.
3			To activate timer recording, press TIMER REC .

Setting for Daily and Weekly Timer Recording

In the Date setting step, press - repeatedly until the desired day(days) is displayed.

Daily recording

From Sunday to Saturday



From Monday to Saturday



From Monday to Friday



Weekly recording

For example, Sunday



Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Euro AV Socket or the Audio/Video input sockets, select the A1 or A2 indicator for the programme position.

A1: Through the Euro AV socket (AV1)

A2: Through the Audio/Video input sockets (AV2)

Selecting the Desired Tape Speed

After step 2, press **NEXT** and select SP or LP by pressing + or -.

Setting other Programmes in Succession

Repeat steps 1 and 2.

Checking a Timer Programme

Select the timer programme number to be checked by pressing **CHECK/PROG**.

Cancelling a Timer Programme

1 Release from the standby mode by pressing **TIMER REC**.

2 Select the timer programme number to be canceled by pressing **CHECK/PROG**.

3 Press + and - simultaneously for more than 3 seconds.

VPS (Video Programme System)/PDC (Programme Delivery Control)

The Video Programme System (VPS) or the Programme Delivery Control (PDC) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news are inserted, the recording will also be interrupted automatically and resumed when the programme continues.

•Press **SHIFT** in step 2 to cancel the VPS (PDC) function.

•If the actual broadcasting times of timer recordings overlap [regardless of whether they are VPS (PDC)-controlled], the recording that starts first has always priority, and the recording of the later beginning programme will start only after the first timer recording has finished.

•When the VPS (PDC) signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular VPS (PDC) signal, the timer recording will be performed in the normal mode (without VPS/PDC) even if it was programmed for VPS (PDC). In this case, even if the timer recording is performed, whatever has been programmed will not be cancelled at that particular time but at 4 a.m. on the following day.

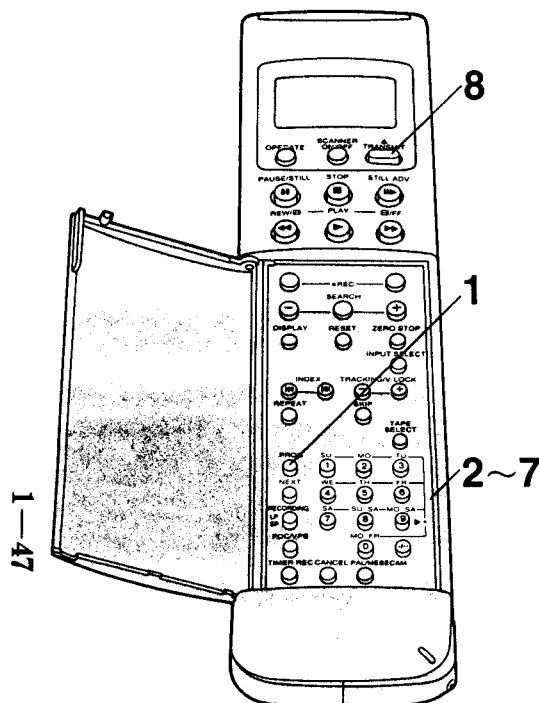
•Model NV-SD40EO is not equipped with VPS (PDC) function. The VPS (PDC) function becomes operative when the VTR is equipped with the optional VPS (PDC) decoder. Consult your authorized video dealer.

Note:

If a timer recording is not performed to the end (due to insufficient tape or cancellation by the user), the programmed timer recording data will be cancelled from the memory by 4 a.m. two days later.

However, if the Timer Record Function is activated at that time, the programmed timer recording data will be cancelled at 4 a.m. the next day.

Using the Remote Controller



For Example:

Programme position (channel): 27
 Date: 3rd, November
 Starting time: 20:02
 Ending time: 21:30
 (Present date: 16th, October)

Note:

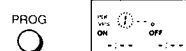
If no operation is performed on the remote controller for more than 60 seconds, the Display turns off.

Preparation

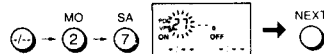
Insert a cassette tape with an intact erasure prevention tab.

Operations

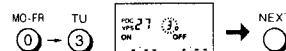
1 Press PROG.



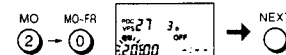
2 Enter Programme position "27", then press NEXT.



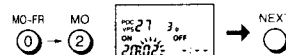
3 Enter Date "3", then press NEXT.



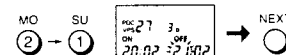
4 Enter Starting time (hour) "20", then press NEXT.



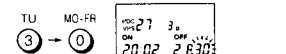
5 Enter Starting time (minute) "02", then press NEXT.



6 Enter Ending time (hour) "21", then press NEXT.



7 Enter Ending time (minute) "30".



8 Press TRANSMIT.



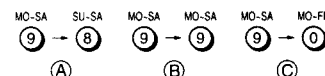
The transmitted data appears on the display of the VTR and a repeated beep confirms the reception.

Daily Timer Recording

For this timer function, several groups of days can be selected.

- (A) Daily recording from Sunday to Saturday
- (B) Daily recording from Monday to Saturday
- (C) Daily recording from Monday to Friday

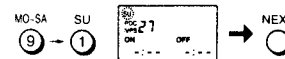
Press the following numeric button within 5 seconds to select the group of days in step 3.



Weekly Timer Recording

Press the 9 button and then the numeric button within 5 seconds in step 3.

For example, SU (Sunday)



Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Euro AV socket, press INPUT SELECT to select the A1 indicator for the programme position.

•A2 cannot be selected.



Selecting the Desired Tape Speed

Press RECORDING SP/LP in any of steps 2~7.



Turning VPS (PDC) function on and off

Press PDC/VPS in any of steps 2~7.



Checking a Timer Programme

- The VTR must be turned on, or the timer recording indicator "TR" is lit.
- Make sure that the display of the Remote Controller is not on.

Press TRANSMIT repeatedly until the desired timer programme number is displayed.



Cancelling a Timer Programme

- 1 Press TRANSMIT repeatedly until the desired timer programme number is displayed.



- 2 Press CANCEL.



Editing

Editing

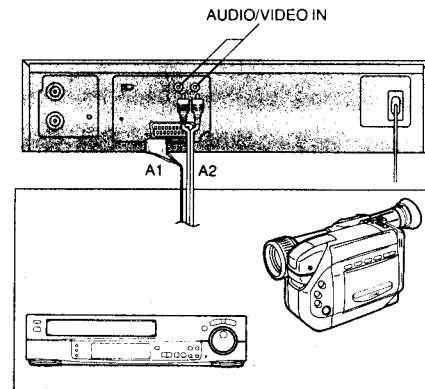
Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

This enables you to record a new segment immediately after a previously recorded segment.

Preparation

- Connect a movie camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1 or A2.
A1: Through Euro AV socket (AV1)
A2: Through Audio/Video input sockets (AV2)
- Set **PAL/MESECAM** according to the colour TV system of the video source.
PAL: When receiving PAL signals
MESECAM: When receiving SECAM signals
The MESECAM Indicator lights up.



Operations

- 1 Press **PAUSE/STILL**.
- 2 Search for the end of the previous recording.
- 3 Set for the new recording by pressing **REC**.
- 4 Start the new recording by pressing **PAUSE/STILL** again.

Synchronized Editing

It is possible to synchronize the playback start and stop of the Movie Camera with the recording start and stop of this VTR.

- Connect a Movie Camera to this VTR with Synchro Connection Cord (optional).
- 1 Put the VTR in the recording pause mode by pressing **REC** and **PAUSE/STILL**.
 - 2 Put the Movie Camera in the still palyback mode at the point where you want to start editing.
 - 3 Press **PAUSE/STILL** on the VTR.
• The Movie Camera changes over to the playback mode and the dubbing will start automatically.

Synchronized Editing between the VTRs

When editing from another VTR equipped with Synchro Edit Socket, synchronized start and stop of both VTRs can be activated from this VTR.

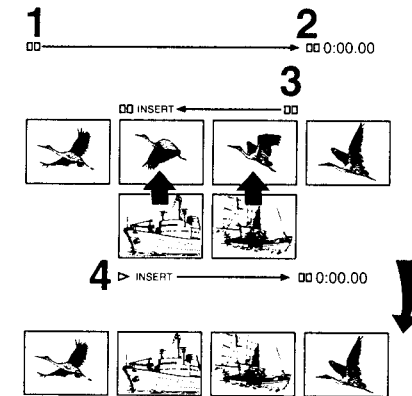
The operation is the same as described for synchronized editing from a Movie Camera.

Insert Editing

This editing method allows a new recorded segment to be inserted into an existing recording to replace an existing segment of the same length.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1 or A2.



Operations

Display Symbols

- 1 Press **PAUSE/STILL**.
- 2 Search for the Edit out (ending) point, and set the counter to 0:00.00 by pressing **RESET**.
- 3 Search for the Edit in (starting) point, and press **INSERT**.
• If you want to replace the sound too, press **AUDIO DUB** as well.
- 4 Start insert editing by pressing **PAUSE/STILL**.
• The insert editing will finish when the counter reaches 0:00.00.

Note:

Insert Editing cannot be used on blank sections of a tape. In this case use Assembly Editing first.

Other Functions

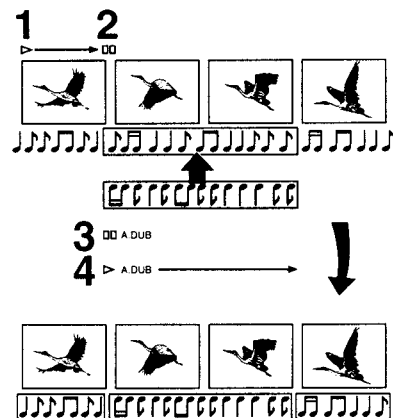
Editing
Other Functions

Audio Dubbing

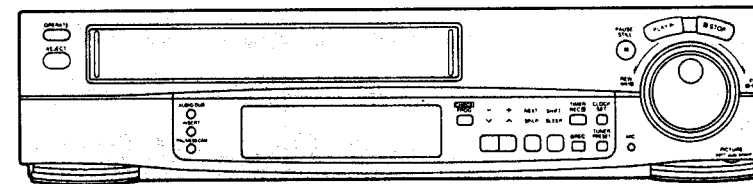
This enables you to record new sound on a previously recorded tape.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1 or A2.



Operations	Display Symbols	
1		Search for the starting point for audio dubbing.
2		Press PAUSE/STILL at the starting point.
3		Set for audio dubbing by pressing AUDIO DUB .
4		Start recording the new sound by pressing PAUSE/STILL . • Stop recording by pressing STOP .



Automatic VTR off at time setting

Press **SLEEP** for the desired time.



- Each press gives a 30 minutes time span up to 9 hours.
- To cancel the setting time, press **SLEEP** repeatedly to set 0:00.

NTSC Playback

Tapes recorded in the NTSC system can be played back with this VTR via a PAL system TV set.

Other Automatic Functions

Automatic Playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off Playback

When the VTR is off, an inserted cassette can be played back by pressing **PLAY**.

Automatic Rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic Switching Off and Ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

Bar Code Operation

Bar Code Operation

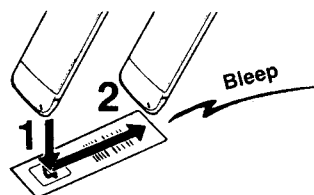
Scanner Preparation

Operating the Remote Controller

Press **SCANNER ON/OFF** to turn it on.

If the remote controller is not operated within 60 seconds (within 4 minutes when setting the clock time), the lamp and Display turns off.

How to use the Scanner



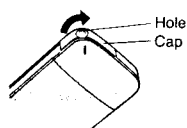
When the Bar Codes Cannot be Read

Although the lamp in the tip of the Bar Code Reading Section lights up:

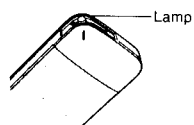
- No figures appear in the Display
- No bleep sounds is heard;

The tip of the Bar Code Reading Section is probably clogged with dirt.

- 1 Remove the cap.



- 2 Gently wipe the tip of the lamp with a soft cloth.



Setting the Clock

Read in the following data successively by tracing bar codes 1 to 6 on the programming sheet.

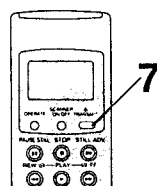
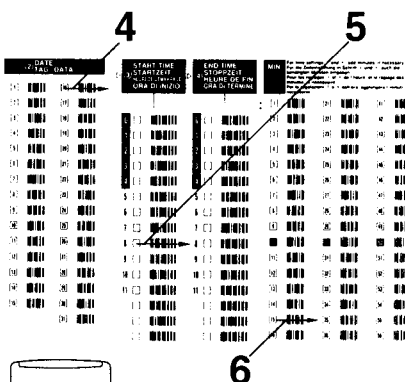
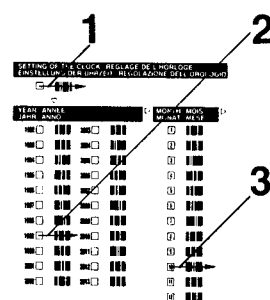
Preparation

Turn on the VTR and the remote controller.

For Example:

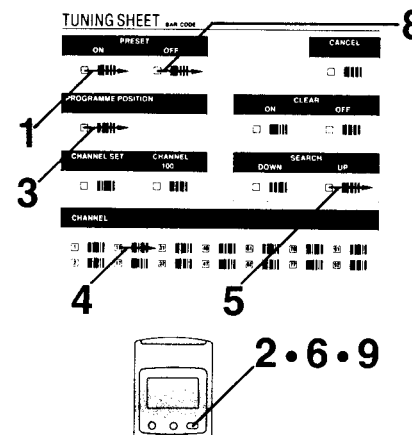
Date: 16th, October 1999

Time: 8:15



Storing TV Broadcasts

Read in the required data successively by tracing the bar codes on page 99.



Preparation

Turn on the VTR and the Remote Controller.

Operations

- 1 Trace the bar code "PRESET ON".
 - If no operations are performed within more than 4 minutes, the Digital Scanner will automatically turn itself off.
- 2 Press **TRANSMIT** to transmit to the VTR.
- 3 Trace the bar code "PROGRAMME POSITION".
- 4 Trace the bar code for the programme position (channel) that you want to tune to a station.
- 5 Trace the bar code "SEARCH UP" or "SEARCH DOWN".
- 6 Press **TRANSMIT** to transmit to the VTR.
 - The channel will be tuned automatically.
 - At every push of the button, the next channel will be tuned.
- 7 Press **PAL/MESECAM** to select SECAM system so that MESECAM indicator is lit on the VTR Display.

- 8 Trace the bar code "PRESET OFF".

- 9 Press **TRANSMIT**.

Notes:

- If you make a mistake in the above operation steps, trace the bar code "CANCEL" and start again from step 4.
- When setting more than 2 channels, repeat the steps 3-7 above.

Setting the Tuner Directly

Perform the operation steps 1-4.

- 5 Trace the bar code "CHANNEL SET".

- 6 Trace the number of the channel for the TV station that you want to tune.

- When tuning a TV station in the hyperband, trace the bar code "CHANNEL 100~" and then trace the bar code "CHANNEL".

Press **TRANSMIT** to transmit to the VTR.

Perform the operation steps 7-9.

If you want to tune further TV stations, repeat the steps 3 to 7.

Blanking of Unoccupied Programme Positions

Perform the operation steps 1-3.

- 4 Trace the bar code for the programme position that you want to blank so that it will be skipped during Up/Down selection of the programme position.

- 5 Trace the bar code "CLEAR ON".

- 6 Press **TRANSMIT** to transmit to the VTR.

- 7 Trace the bar code "PRESET OFF".

- 8 Press **TRANSMIT**.

Cancelling the Clear Function (Blanking)

Perform the operation steps 1-3 above.

- 4 Trace the bar code for the programme position that has been blanked until now.

- 5 Trace the bar code "CLEAR OFF".

Perform the operation steps 6-8 above.

- To programme a timer recording or the set the clock time immediately after setting the tuner in the VTR by using the Remote Controller, first press **SCANNER ON/OFF** on the Remote Controller to turn it off, before starting the above operation.

Timer Recording

Successively scan the data for the programme position (channel), day, starting time and ending time by tracing bar codes 1 to 6 on the programming sheet.

Preparation

Turn on the VTR and the remote controller.

For Example:

Programme position (channel); 4
Date; 3rd, November
Starting time; 8:02
Ending time; 9:30
(Present date; 16th, October)

1—51

1 CHANNEL CHAIN
PROGR PLATZ CANALE

2 DATE
TAG DATA

3 START TIME
STARTZEIT
HEURE DE DEBUT
ORA D'INIZIO

4 END TIME
STOPPZEIT
HEURE DE FIN
ORA DI TERMINE

5 MIN

6

7

Daily and Weekly Timer Recording

In the step 2, trace the bar code for:

Daily

Sunday to Saturday

(SU~SA)



Monday to Friday

(MO~FR)



Monday to Saturday

(MO~SA)



Weekly

For example;
Sunday

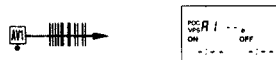
EVERYWEEK
WÖCHENTLICH
HEBDOMADAIRE
SETTIMANALE



Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Euro AV socket, the AV1 bar code in the CHANNEL column must be traced in the step 1.

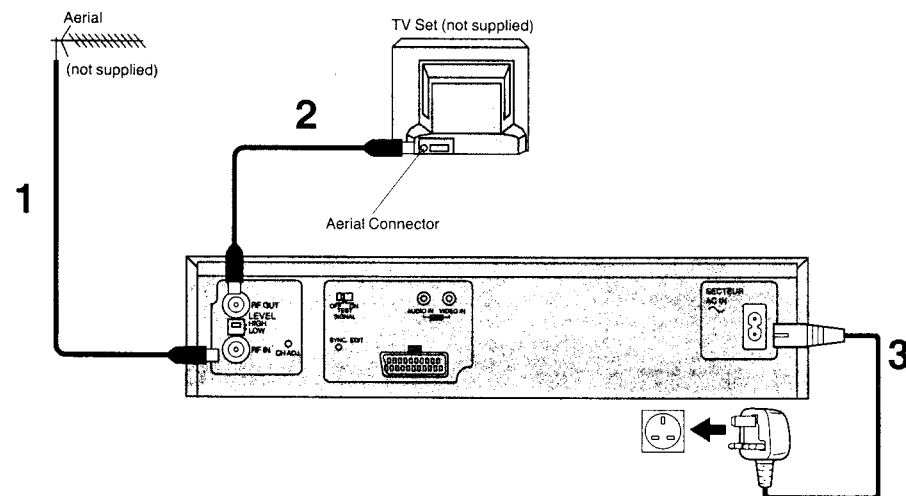
• AV2 cannot be selected.



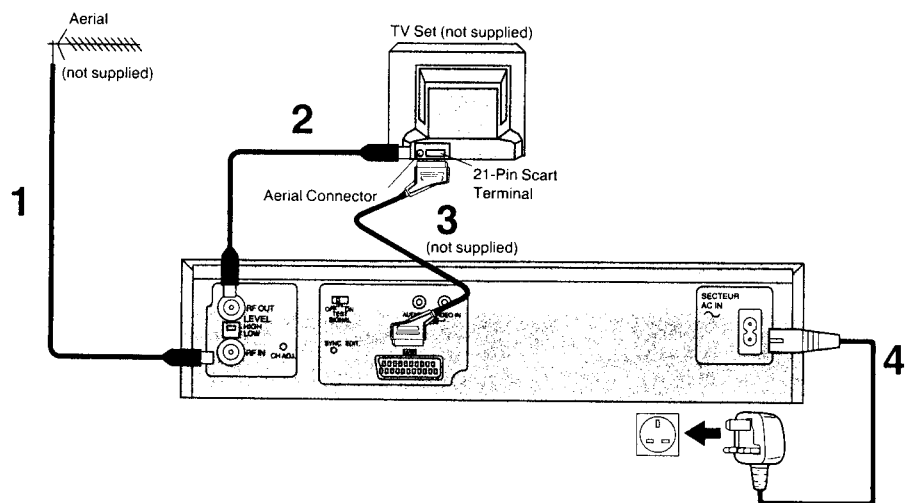
Connections

Basic Connections

The following connections are required to record and play back the VTR through a TV set:

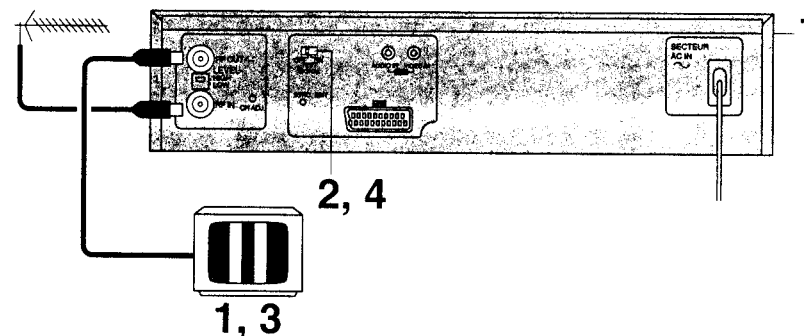


Connection to a TV Set with 21-Pin Scart Terminal



Tuning the TV to your VTR

Connections
Tuning the TV to your VTR



It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VTR to the TV through the 21-pin scart terminal, then you do not need to follow the procedure mentioned below.

Operations

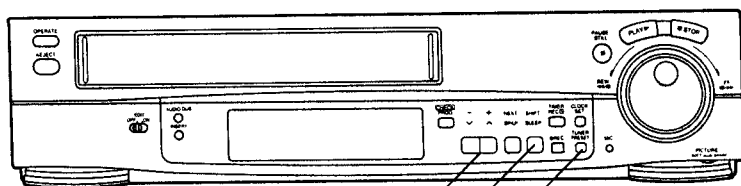
1	OPERATE	Turn on the TV and VTR.
2	OFF ON TEST SIGNAL	To generate a test pattern, set TEST SIGNAL to ON.
3		Set the TV to an unused position which you wish to use for your video playback. • Tune the TV until the test pattern appears on the screen.
4	OFF ON TEST SIGNAL	Set TEST SIGNAL to OFF.

Note:
The test signal is transmitted on channel 36 of the UK broadcasting channels. If you are encountering interference from another broadcast on the video channel, you may readjust to a free channel by using the **CH ADJ.** screw which is located on the rear of the VTR.

Please note that if the **CH ADJ.** screw is used then you will have to retune your TV to the test signal as in item 2 to 4 above.

Storing TV Broadcasts into your VTR

Storing TV Broadcasts into your VTR

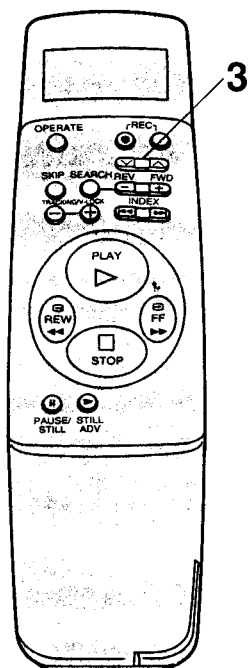


Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and select the programme position except A1 and A2.
- Install the batteries in the remote controller. See page 20.



Operations

Display Symbols

- TUNER PRESET** Keep **TUNER PRESET** pressed until a bleep sound is heard.
- Search for the TV Station.
• If the required station is not displayed, press + or - again.
- Select programme position.
- SHIFT** Memorize the broadcast station.
• To memorize the other stations, repeat steps 2 to 4.
- TUNER PRESET** Press **TUNER PRESET**.

Note:

- While tuning, your video may lock onto several weak stations from distant transmitters. Should this occur press + or - again until a strong station is received.

Channel Plan

It is recommended that you set the programme positions on the VTR to match the remote controller setting, so when using the Video Plus+ programming the correct broadcast station is recorded.

The table below shows the correct setting:

Programme position	TV station
1	BBC1
2	BBC2
3	ITV
4	Channel 4
A1, A2, 5~20	*Satellite input

*Satellite input

To receive satellite stations, the satellite receiver must be connected to the VTR and programme position must be set depending on the type of the connection made.

- A1: When the satellite receiver is connected to the AV1 socket
- A2: When the satellite receiver is connected to the Audio/Video input sockets (AV2)
- 5~20: When the satellite receiver is connected by means of the RF coaxial cable. Follow the tuning procedure on page 10.

Tuning Procedure on the VTR

Stations can be tuned in by following the steps given below.

- Press **TUNER PRESET** until a bleep sound is heard.
- Search for the TV station by pressing + or -, and then press **NEXT**.
- Select programme position by using + or -.
- Press **SHIFT** to memorize the broadcast station.
• To memorize the other stations, press **NEXT** and then repeat steps 2 to 4.
- Press **TUNER PRESET**.

Setting the Satellite Position on the Remote Controller

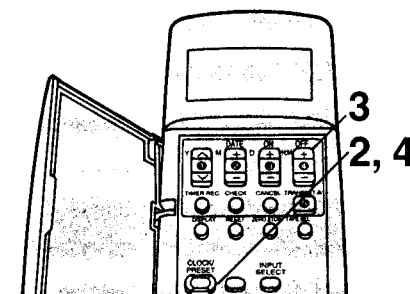
The remote controller must be set to the selected programme position for the satellite receiver, in order to record satellite stations using Video Plus+ programming.

Note:

A satellite receiver cannot be operated using this unit's remote controller.

Preparation

Set the clock of the remote controller first. See page 12.



Operations

Display Symbols

- Open the door of the remote controller.
- Keep **CLOCK/PRESET** pressed for 2 seconds or more and then press it again.
- Select A1, A2 or 5~20.
- Press **CLOCK/PRESET**.
- Close the door of the remote controller.

Setting the Clock of the VTR

Setting the Clock of the VTR

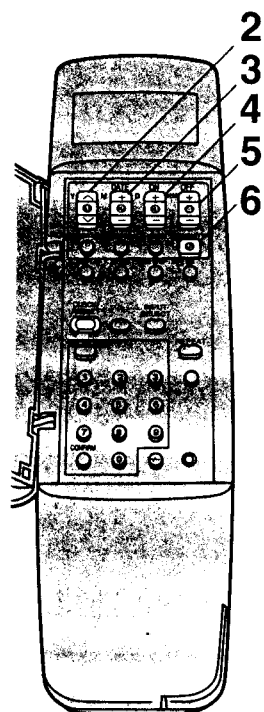
By setting the time on the remote controller's clock and then by transmitting this setting to the VTR, the clocks on both the remote controller and VTR display the same time. The built-in digital clock employs the 24-hour system.

Preparation

- Turn on the VTR.
- Install the batteries in the remote controller. See page 20.

For Example:

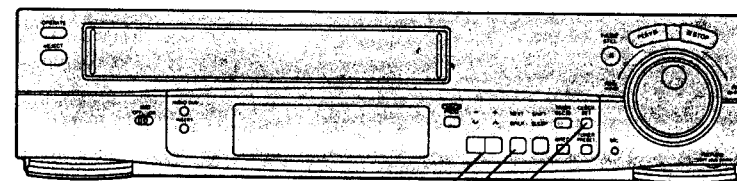
Date: 16th, October, 1999
Time: 20:15



Operations	Display Symbols	
1		Open the door of the remote controller.
2		Set Year "99".
3		Set Month "10".
4		Set Date "16".
5		Set Time "20:15". • When it is kept pressed, the indication changes in 30-minute steps.
6		Press TRANSMIT.
7		Close the door of the remote controller.

Note:

To change the previous clock setting, press **CLOCK/PRESET** for at least 2 seconds. The previous clock setting will be displayed. Then follow steps 2 to 7 above.



In addition to setting the VTR clock from the remote controller, it can also be set directly from the VTR.

Preparation

Turn on the VTR.

For Example:

Date: 16th, October, 1999
Time: 20:15

Operations	Display Symbols	
1		Keep CLOCK SET pressed until a bleep sound is heard.
2	Set each item by pressing + or - and NEXT.	
		Set Year "99".
		Set Month "10".
		Set Date "16".
		Set Hour "20".
		Set Minute "15". • There is no need to press NEXT.
3		Press CLOCK SET . • The clock will start.

Time Reset Function

If the clock is less than two minutes slow or fast, it can easily be reset to the proper time.

For example: Resetting the clock to 12:00.00.

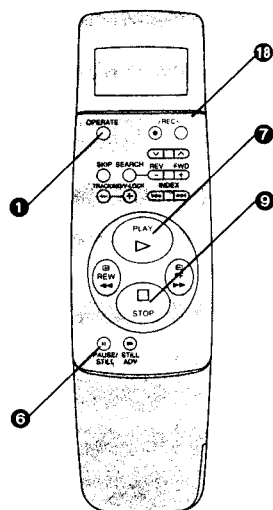
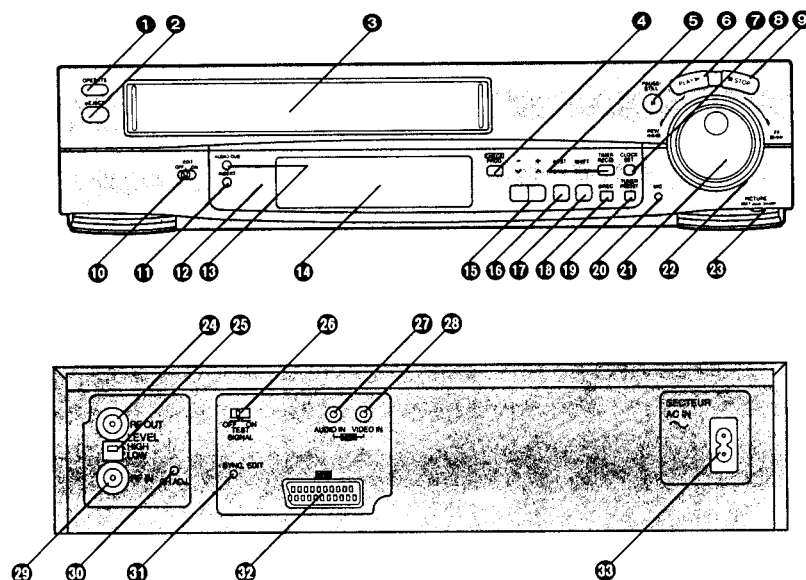
- 1 Press **CLOCK SET** at any time between 11:58.00 and 12:01.59 until the bleep sound is heard.
- 2 Press **CLOCK SET** again as soon as you hear the 12:00.00 time signal.

Note:

The clock operates for at least 60 minutes by its backup system in the event of power failure.

Controls and Connection Sockets

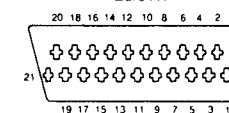
Controls and Connection Sockets



- 1 OPERATE**
To turn the VTR on and off.
- 2 EJECT**
To eject a video cassette.
- 3 Cassette Compartment**
Insert a video cassette here.
- 4 CHECK/PROG**
To select a timer programme number.
"1, 2, 3... or 8" is lit.
To display details of preset timer recording.
- 5 TIMER REC**
To turn the timer recording function on and off.
[] is lit or not lit.
Once activating timer recording function, the normal VTR operation is not possible unless this button is set off.
- 6 PAUSE/STILL**
During playback: Still picture.
During recording: To interrupt recording.
- 7 PLAY**
To start playback. ">" is lit.
- 8 CLOCK SET**
To set the time.
- 9 STOP**
To stop any playback or recording.

- 10 EDIT**
OFF: For normal VTR operation.
ON: For dubbing.
- 11 INSERT**
To set up the VTR for insert editing.
INSERT indicator lights up.
- 12 Infra-red Remote Control Receiver Window**
- 13 AUDIO DUB**
To set up the VTR for audio dubbing.
A.DUB indicator lights up.
- 14 Display**
- 15 V Λ/- +**
To set the required programme position (TV station).
To set the clock and timer recording.
- 16 SP/LP/NEXT**
To select the tape speed required for recording.
SP gives the best picture quality.
LP gives the longest recording time.
To proceed to the next item during setting procedure.
- 17 SLEEP/SHIFT**
To set the time to turn off the VTR automatically.
To memorize programme position.
- 18 REC**
To start a recording.
- 19 TUNER PRESET**
To initiate TV station settings for the tuner.
- 20 MIC**
To connect a microphone for recording.
- 21 Jog Dial**
To locate any desired frame with utmost precision.
- 22 Shuttle Ring**
In the stop mode: To rewind or fast forward the tape.
In the playback mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.
- 23 PICTURE**
To make picture sharper (SHARP) or softer (SOFT).

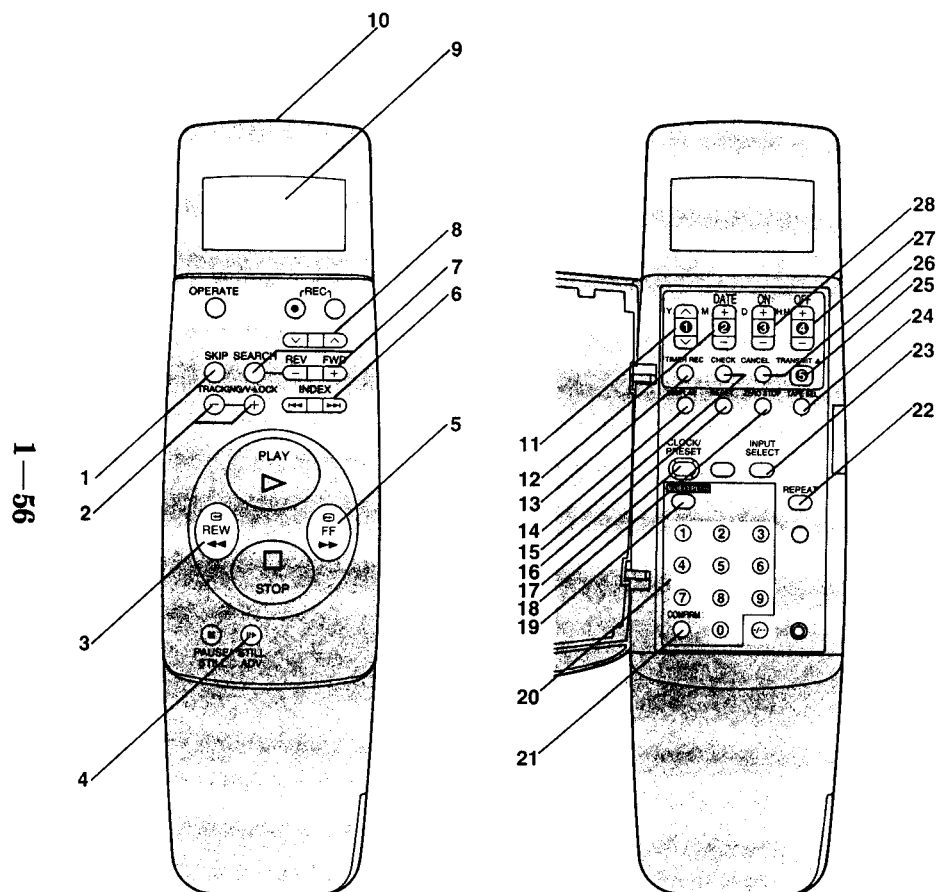
- 24 RF OUT**
To connect to the aerial terminal on a TV set.
- 25 LEVEL**
Used to adjust the UHF aerial signal strength.
HIGH: For normal position.
LOW: If a diagonal pattern or stripes appear on the picture.
- 26 TEST SIGNAL**
The test signal is transmitted on channel 36.
- 27 AUDIO IN (AV2)**
To connect an audio cable to a video camera or another video recorder.
- 28 VIDEO IN (AV2)**
To connect a video cable to a video camera or another video recorder.
- 29 RF IN**
To connect to the external aerial.
- 30 CH ADJ.**
To adjust the RF transmitting channel 30-42.
- 31 SYNC. EDIT**
Connecting to a Movie Camera equipped with Synchro Edit Function.
- 32 AV1**
This 21-pin scart terminal carries input and output signals for both picture and sound. TV sets equipped with a similar socket can be connected here.
This is also called Scart
Peritel
Euro Connector
Euro AV



- | | |
|----------------|---------------------|
| 1 AUDIO OUTPUT | 8 SWITCHING VOLTAGE |
| 2 AUDIO INPUT | 17 VIDEO GROUND |
| 3 AUDIO OUTPUT | 19 VIDEO OUTPUT |
| 4 AUDIO GROUND | 20 VIDEO INPUT |
| 6 AUDIO INPUT | 21 GROUND |
- No connection: 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 18
- 33 AC IN~**
To connect to the main power supply.

Infra-red Remote Controller

Infra-red Remote Controller



1—56

1 SKIP

To start cue playback in 30 seconds interval during playback.

- Each press gives a 30 seconds time span up to 4 minutes.

2 TRACKING/V-LOCK

For manual tracking adjustment

The + and - buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment

When noise bars appear during Still, Still Advance or Slow playback, switch over to slow playback and adjust with the + or - button to reduce the noise bars.

For vertical locking adjustment

Use the + and - buttons to minimize any vertical jitter during still-picture playback.

3 REW (REWIND)

In the stop mode: To rewind the tape.

In the playback mode: To search backward.

In the rewind mode: To obtain high speed picture. "<<" is lit.

4 STILL ADV

To advance a still picture during still playback.

5 FF (FAST FORWARD)

In the stop mode: To fast forward the tape.

In the playback mode: To search forward.

In the fast forward mode: To obtain high speed picture. ">>" is lit.

6 INDEX

For the index search function.

7 SEARCH

To adjust the playback speed backward or forward.

8 V ^

To select the required programme position (TV station).

9 Display

10 Infra-red Transmitter

The programming data are transmitted from here to the VTR.

11 ^ V (Y)

- To programme a timer recording.
- To set the clock.

12 DATE (M)

- To programme a timer recording.
- To set the clock.

13 TIMER REC

To turn the timer recording function on and off.
[] is lit or not lit.

14 DISPLAY

To change the indication on the VTR Display.

→ Clock → Counter → Remaining Tape Time →

15 CHECK

To check timer programmes.

16 RESET

To reset the tape counter (elapsed time) to "0:00.00".

- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

17 CLOCK/PRESET

- To set the clock.
- To set the satellite position.

18 ZERO STOP

For the zero stop function.

19 VIDEO PLUS

To programme a Video Plus+ PlusCode.

20 Programme Position Selector Buttons

- To select the programme positions.

9: 9
19: 19 → 1 → 9

- To enter a PlusCode.

21 CONFIRM

To convert the data of a PlusCode.

22 REPEAT

For the repeat playback function.

23 INPUT SELECT

To select the "A1" or "A2" external recording source.

24 TAPE SEL

To set the cassette tape length in order to obtain correct indication of the remaining tape time.

E195: For E30, -60, -80, -120, -180 and -195 tapes.

E240: For E240 tape.

E260: For E260 tape.

25 TRANSMIT

To transmit the data that has been set on the remote controller to the VTR.

26 CANCEL

To cancel the settings made for a timer recording.

27 OFF (H:M)

- To programme a timer recording.
- To set the clock.
- To set the satellite position.

28 ON (D)

- To programme a timer recording.
- To set the clock.

Power Source for the Remote Controller

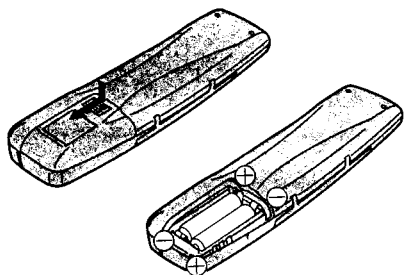
The remote controller is powered by 2 "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

- When whatever appears on the display becomes faint, please replace the batteries with new ones.

Precautions for Battery Replacement

- Load the new batteries with their polarity (+ and -) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

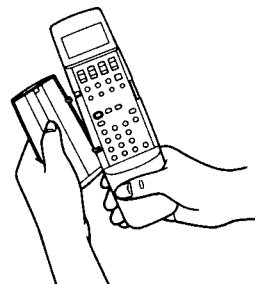
Installing the Batteries



How to refit the Remote Controller Door

If the door of the remote controller is forced to open too much, it may come off. In this case, please follow the steps below.

- 1 Refit the lower part of the door.

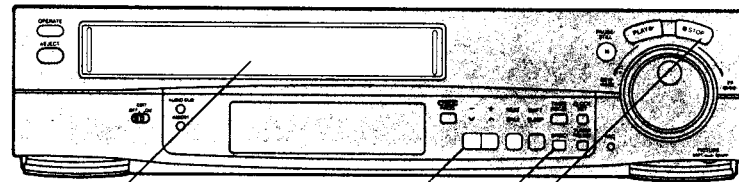


- 2 Insert the upper part of the door until it locks with a click.



On-the-spot Recording

On-the-spot Recording

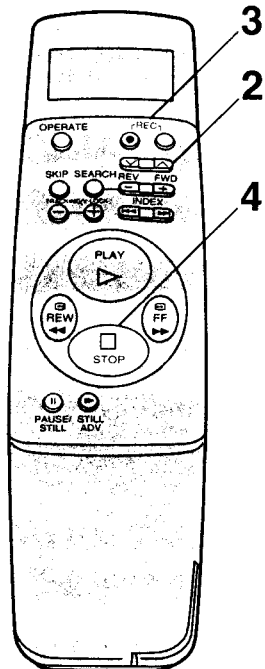


1

2

3

4



Operations

Display Symbols

1



Insert a cassette tape.
• If it has already been inserted, press **OPERATE** to turn the VTR on.

2



Select TV station.

3

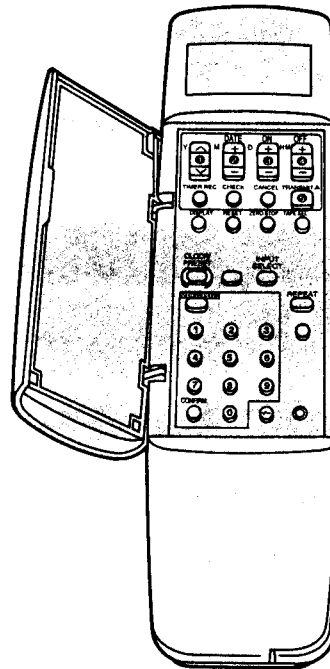


Start recording.

4



Stop recording.



To select the Desired Tape Speed

Press **SP/LP** before recording.



To interrupt Recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.



To record One TV Programme while Viewing Another Programme

- 1 Refer to the on-the-spot recording operations steps 1 to 3.
- 2 Select the TV programme on your TV set you wish to view at the present time.

To display the Approximate Remaining Tape Time

- 1 Press **TAPE SEL** to select the corresponding cassette tape length.



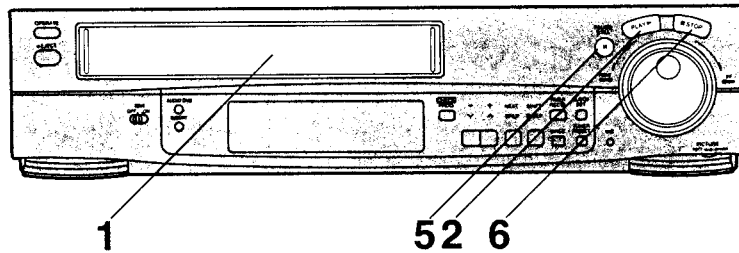
E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

- 2 Press **DISPLAY**.

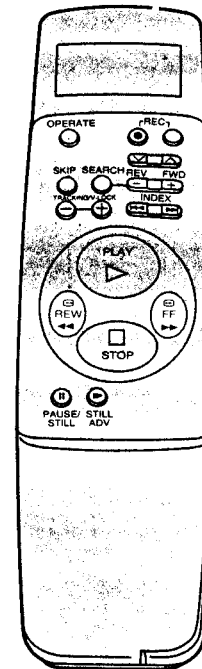
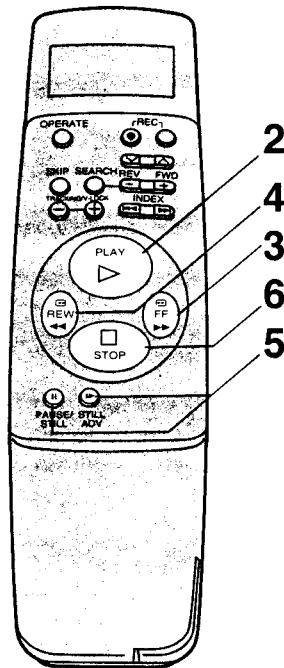


Notes:

- When a video cassette with a broken off tab is inserted, the "E195" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes, and be back to the stop mode.



Operations	Display Symbols	
1		Insert a recorded cassette tape.
2		Start viewing the picture.
3		Search forward by tapping FF . • To change back to normal playback, press PLAY .
4		Search backward by tapping REW . • To change back to normal playback, press PLAY .
5		View a still picture. • To advance one frame of the still picture, press STILL ADV . • To continue the normal playback, press PLAY or PAUSE/STILL .
6		Stop viewing the picture.

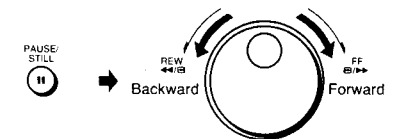


Other Playback Functions

To change the Playback Speed

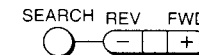
Using Shuttle Ring:

- 1 Press **PAUSE/STILL**.
- 2 Rotate Shuttle Ring.



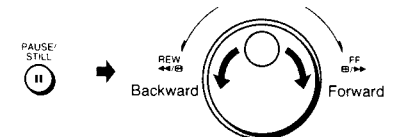
Using Remote Controller:

- 1 Press **SEARCH**.
- 2 Press **FWD** or **REW** repeatedly.
FWD: To increase the playback speed forward
REW: To increase the playback speed backward



To locate the Desired Picture exactly

- 1 Press **PAUSE/STILL**.
- 2 Turn Jog Dial.



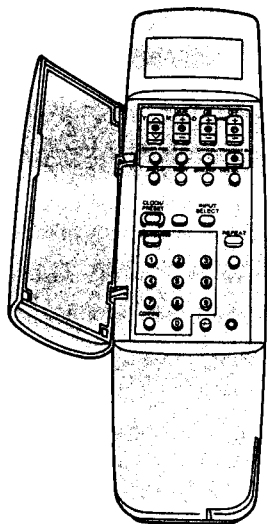
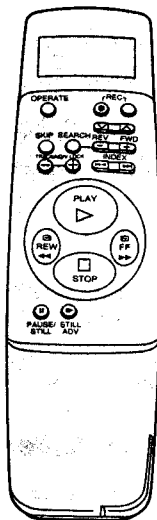
To obtain High Speed Picture during Fast Forward or Rewind

Keep **FF** pressed during fast forward.
Keep **REW** pressed during rewind.



- The same operation can also be performed by turning the Shuttle Ring.

Note:
Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.



To Skip Scene

Press **SKIP** during playback.



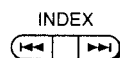
- The following 30 seconds will be skipped.
- Each press gives a 30 seconds time span up to 4 minutes.

To find the Beginning of Each Recording

For example:

Searching for the 2nd recorded segment in the forward direction.

Press **INDEX** twice.



- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press **INDEX** .
- Up to 20 programmes can be searched for in both directions.
- When the incorrect numerical data has been entered, press **STOP** and enter the correct data.

Recording Index Signals

Index signals are recorded in following cases.

WRITE indicator appears on the Display.

- When a recording is started by pressing **REC**.
- When **REC** is pressed during recording.
- When timer recording is activated.

To return to a Specified Scene

1 Press **RESET** to set the counter to 0:00.00.

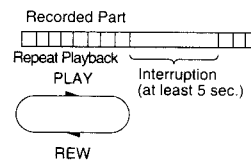
2 After playback, press **ZERO STOP** in the stop mode.



- The tape will be rewound or fast forwarded to 0:00.00.

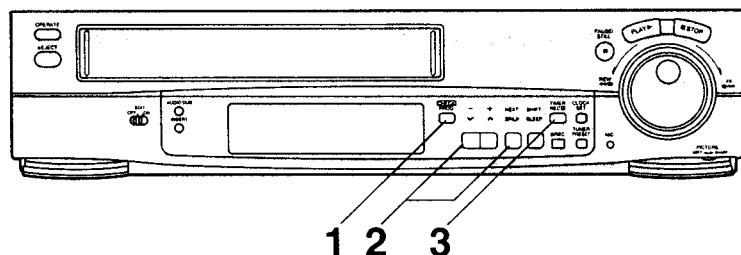
To playback a Recorded Part repeatedly

Press **REPEAT** in the stop mode.



Timer Recording

Timer Recording



Introduction

Up to 8 timer programmes can be recorded up to one month in advance by setting the timer, including daily and weekly programmes.

Preparation

Insert a cassette tape with an intact erasure prevention tab.

For Example:

Timer programme number; 1
 Programme position (channel); 2
 Date; 27th, October
 Starting time; 20:02
 Ending time; 21:30
 (present date; 16th October)

Operations

Display Symbols

1			Select Timer programme number "1".
2	Set each item by pressing + or - and NEXT.		
			Set Programme position (channel) "2".
			Set Date "27". •For daily and weekly recording, see next page.
			Set Starting time (hour) "20".
			Set Starting time (minute) "02".
	NEXT		Set Ending time (hour) "21".
			Set Ending time (minute) "30". •There is no need to press NEXT.
3			To activate timer recording, press TIMER REC.

Setting for Daily and Weekly Timer Recording

In the Date setting step, press - repeatedly until the desired day(day(s)) is displayed.

Daily recording

From Sunday to Saturday

SU MO TU WE
TH FR SA

From Monday to Saturday

MO TU WE
TH FR SA

From Monday to Friday

MO TU WE
TH FR

Weekly recording

For example, Sunday

SU

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the AV1 socket or the Audio/Video input sockets, select the A1 or A2 indicator for the programme position.

A1: Through the AV1 socket

A2: Through the Audio/Video input sockets (AV2)

Selecting the Desired Tape Speed

After step 2, press NEXT and select SP or LP by pressing + or -.

Setting other Programmes in Succession

Repeat steps 1 and 2.

Checking a Timer Programme

Select the timer programme number to be checked by pressing CHECK/PROG.

Cancelling a Timer Programme

1 Release from the standby mode by pressing **TIMER REC.**

2 Select the timer programme number to be canceled by pressing **CHECK/PROG.**

3 Press + and - simultaneously for more than 3 seconds.

Note:

If a timer recording is not performed to the end (due to insufficient tape or cancellation by the user), the programmed timer recording data will be cancelled from the memory by 4 a.m. two days later.

However, if the Timer Record Function is activated at that time, the programmed timer recording data will be cancelled at 4 a.m. the next day.

Optional Function

PDC (Programme Delivery Control)

The Programme Delivery Control (PDC) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news are inserted, the recording will also be interrupted automatically and resumed when the programme continues.

• This model is not equipped with PDC function. The PDC function becomes operative when the VTR is equipped with the optional PDC decoder. Consult your authorized video dealer.

• If the VTR is equipped with the PDC decoder, the PDC indicator lights when the correct PDC signals are transmitted from the broadcasting station.

• When the unit is set for programmed recording, the PDC indicator lights whether or not PDC signals are transmitted. This indicates that the recording has been programmed with PDC. To programme a recording without PDC, press **SHIFT**; this cancels the PDC function and turns off the PDC indicator.

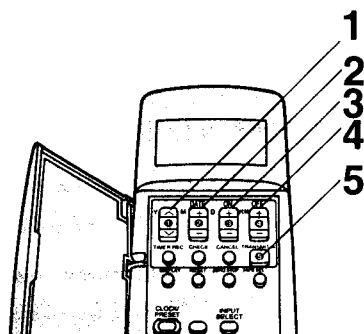
• Since PDC signals are received when a recording is programmed using PDC, the power of the unit's tuner section is turned on and the programmed broadcasting is received. When a multiple number of programmes have been programmed for timer recording, all of the broadcasts concerned will be received in sequence. These broadcast pictures can be seen on the video playback channel and AV out (no sound).

• If the actual broadcasting times of timer recordings overlap (regardless of whether they are PDC-controlled), the recording that starts first has always priority, and the recording of the later beginning programme will start only after the first timer recording has finished.

• When the PDC signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular PDC signal, the timer recording will be performed in the normal mode (without PDC) even if it was programmed for PDC.

In this case, even if the timer recording is performed, whatever has been programmed will not be cancelled at that particular time but at 4 a.m. on the following day.

Using the Remote Controller



For Example:

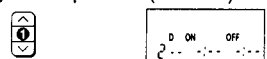
Programme position (channel); 2
Date; 27th, October
Starting time; 20:02
Ending time; 21:30

Preparation

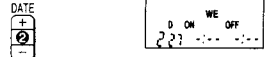
- Insert a cassette tape with an intact erasure prevention tab.
- Open the door of the remote controller.

Operations Display Symbols

1 Set Programme position (channel) "2".



2 Set Date "27".



3 Set Starting time "20:02".



- When it is kept pressed, the indication changes in 30-minute steps.

4 Set Ending time "21:30".



5 Press TRANSMIT.



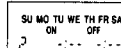
6 Close the door of the remote controller.

Daily Timer Recording

For this timer function, several groups of days can be selected.

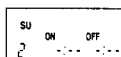
- (A) Daily recording from Sunday to Saturday
- (B) Daily recording from Monday to Saturday
- (C) Daily recording from Monday to Friday

In step 3, select the desired days by pressing **DATE** --.
For Example, (A)



Weekly Timer Recording

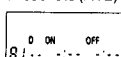
In step 3, select the desired day by pressing **DATE** --.
For example, SU (Sunday)



Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the AV1 socket or the Audio/Video input sockets, select the A1 or A2 indicator in step 1 for the programme position.

- A1: Through the AV1 socket
- A2: Through the Audio/Video input sockets (AV2)



Checking a Timer Programme

- The VTR must be turned on, or the timer recording indicator "D" is lit.

Press **CHECK** repeatedly until the desired timer programme number is displayed.



Cancelling a Timer Programme

- 1 Press **CHECK** repeatedly until the desired timer programme number is displayed.



- 2 Press **CANCEL**.

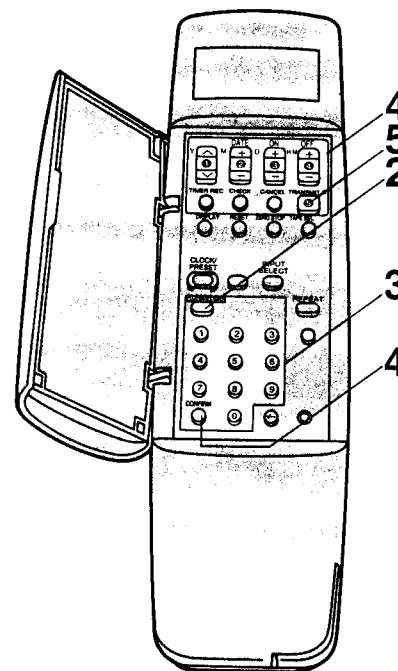


Note:

The tape speed (SP/LP) cannot be set with the remote controller. Before programming, select SP or LP on the VTR.

Programming the Video Plus+ PlusCode

Programming is now easier than ever: simply enter the PlusCode provided in the programme schedule column carried by newspapers and magazines.
PlusCodes are numbers which are assigned to each programme listed in the TV programme schedule carried in newspapers and TV guides. When these codes are entered and **TRANSMIT** is pressed, the codes are converted into the actual programming and sent to the VTR.

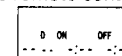


Preparation

- Insert a cassette tape with an intact erasure prevention tab.
- Set the programme positions on both the VTR and remote controller as shown on page 11.

Operations Display Symbols

1 Open the door of the remote controller.

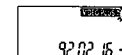


2 Press VIDEO PLUS.



3 Enter a PlusCode.

Example: 920216



4 Press CONFIRM to check that the code corresponds to the right programme.



- To make any corrections, use buttons 1~4.

5 Press TRANSMIT.



6 Close the door of the remote controller.

Notes:

- When the PlusCode is used for programming, the recording time may be slightly longer than the actual programme time.
- Repeat steps 2 to 4 if "Err" appears on the remote controller.
- When programming two or more programmes, repeat steps 2 to 5 after pressing **TRANSMIT**.
- The procedures for checking and canceling whatever has been programmed are the same as for remote control programming.
- The tape speed (SP/LP) cannot be set with the remote controller. Before programming, select SP or LP on the VTR.

Note:

A satellite receiver cannot be operated using this unit's remote controller.

Editing

Editing

Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

A new scene can be added to the end of a previous one.

Preparation

- Connect a movie camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1 or A2.
A1: Through AV1 socket
A2: Through Audio/Video input sockets (AV2)
- Set **EDIT** to ON.

Operations

- 1 Press **PAUSE/STILL**.



- 2 Search for the end of the previous recording.



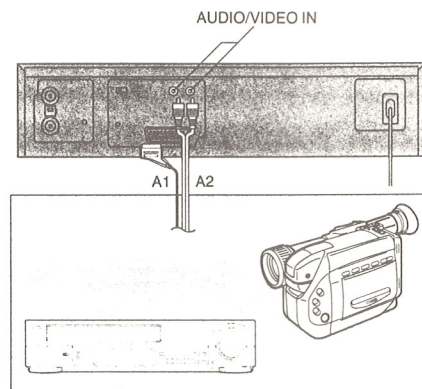
- 3 Set for the new recording by pressing **REC**.



- 4 Start the new recording by pressing **PAUSE/STILL** again.



Note:
Set **EDIT** to OFF for ordinary use of the VTR.



Synchronized Editing

It is possible to synchronize the playback start and stop of the Movie Camera with the recording start and stop of this VTR.

- Connect a Movie Camera to this VTR with Synchro Connection Cord (optional).

- 1 Put the VTR in the recording pause mode by pressing **REC** and **PAUSE/STILL**.
- 2 Put the Movie Camera in the still playback mode at the point where you want to start editing.
- 3 Press **PAUSE/STILL** on the VTR.
• The Movie Camera changes over to the playback mode and the dubbing will start automatically.

Synchronized Editing between the VTRs

When editing from another VTR equipped with Synchro Edit Socket, synchronized start and stop of both VTRs can be activated from this VTR.

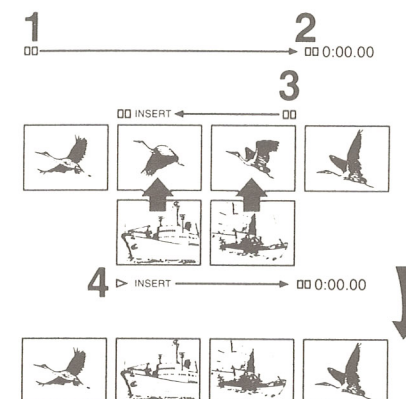
The operation is the same as described for synchronized editing from a Movie Camera.

Insert Editing

This editing method allows a new recorded segment to be inserted into an existing recording to replace an existing segment of the same length.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1 or A2.
- Set **EDIT** to ON.



Operations

1



Press **PAUSE/STILL**.

2



RESET



Search for the Edit out (ending) point, and set the counter to 0:00:00 by pressing **RESET**.

3



INSERT



Search for the Edit in (starting) point, and press **INSERT**.
• If you want to replace the sound too, press **AUDIO DUB** as well.

4



Start insert editing by pressing **PAUSE/STILL**.
• The insert editing will finish when the counter reaches 0:00:00.

Note:
Insert Editing cannot be used on blank sections of a tape. In this case, use Assembly Editing first.

Other Functions

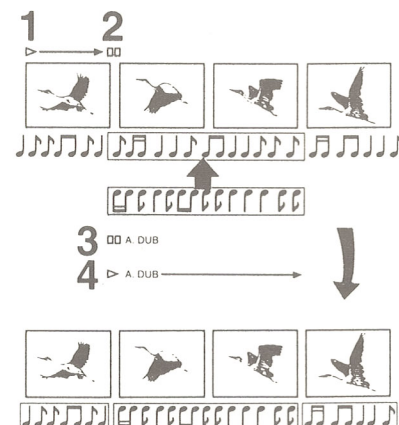
Editing
Other Functions

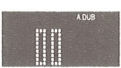
Audio Dubbing

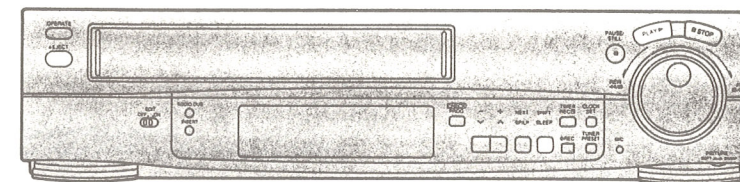
This enables you to record new sound on a previously recorded tape.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1 or A2.



Operations	Display Symbols	
1	 	Search for the starting point for audio dubbing.
2	 	Press PAUSE/STILL at the starting point.
3	 	Set for audio dubbing by pressing AUDIO DUB .
4	 	Start recording the new sound by pressing PAUSE/STILL . • Stop recording by pressing STOP .



Playback of NTSC Tape

Tapes recorded in the NTSC system can be played back with this VTR via a PAL system TV set.

- NTSC is the TV broadcasting system used in U.S.A., Japan, and some other countries.
 - PAL is another TV broadcasting system used in U.K., Germany and many other parts of the world.
- This VTR will not replay or record tapes on the SECAM broadcasting system.
- NTSC 4.43 is a modified version of the PAL broadcasting system to allow most UK TV's to reproduce a colour picture when an NTSC tape is replayed on this VTR. However due to the system change, the picture may shrink, roll or not reproduce colour on some televisions.

Automatic VTR Functions

Automatic Playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off Playback

When the VTR is off, an inserted cassette can be played back by pressing **PLAY**.

Automatic Rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic Switching Off and Ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

Automatic VTR Off Time Setting

Press **SLEEP** for the desired time.



- Each press gives a 30 minutes time span up to 9 hours.
- To cancel the setting time, press **SLEEP** repeatedly to set 0:00.

SECTION 2 ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY METHOD

2-1-1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing. When reassembling, perform the steps in the reverse order.

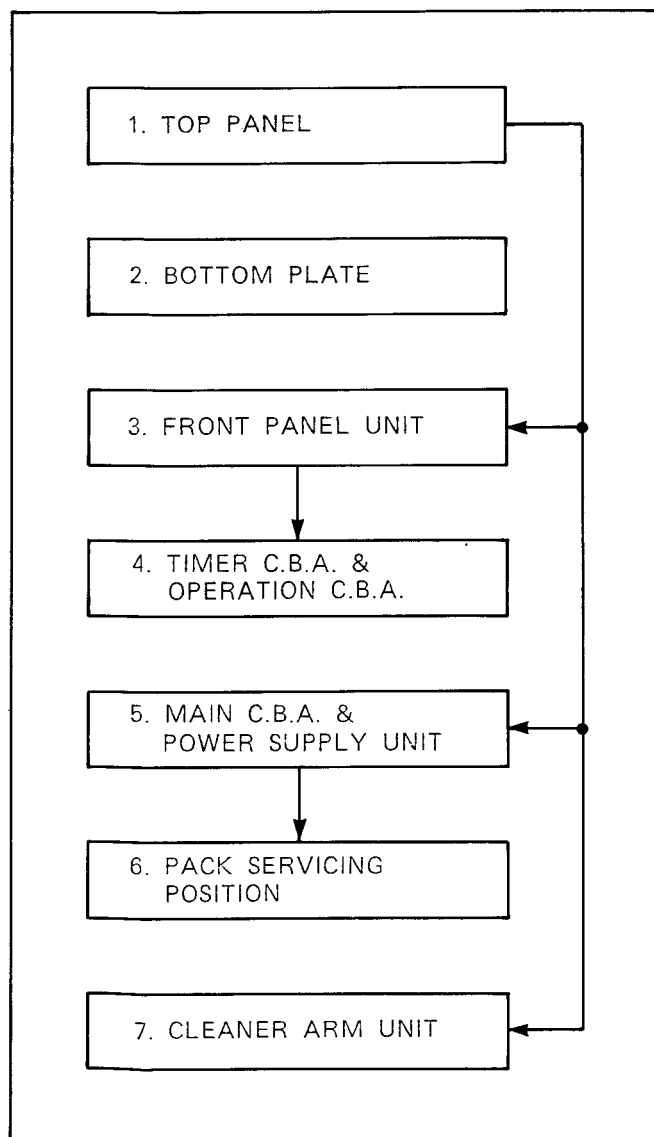


Fig. D1

2-1-2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL

Removal.....2 Screws(A)
(NV-SD30B)
Removal.....4 Screws(A)
(NV-SD30EG,SD40EG/B)

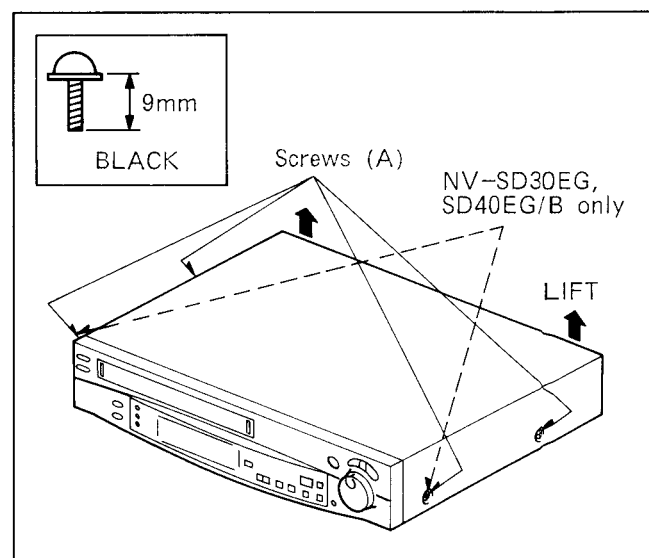


Fig. D2

2. REMOVAL OF THE BOTTOM PLATE

Remove.....6 Screws(B)

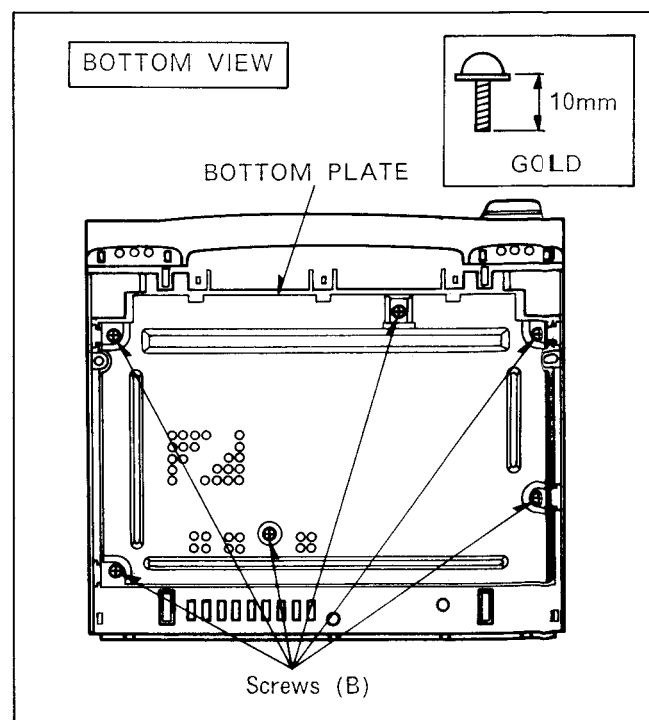


Fig. D3

SECTION 2

3. REMOVAL OF THE FRONT PANEL UNIT

Pull OUT.....Jog/Shuttle Dial
Remove.....Screw (C)
Unlock.....6 Tabs(D)

CAUTION:

Confirm that the Jog/Shuttle Dial is pulled out before removing the Front Panel Unit.

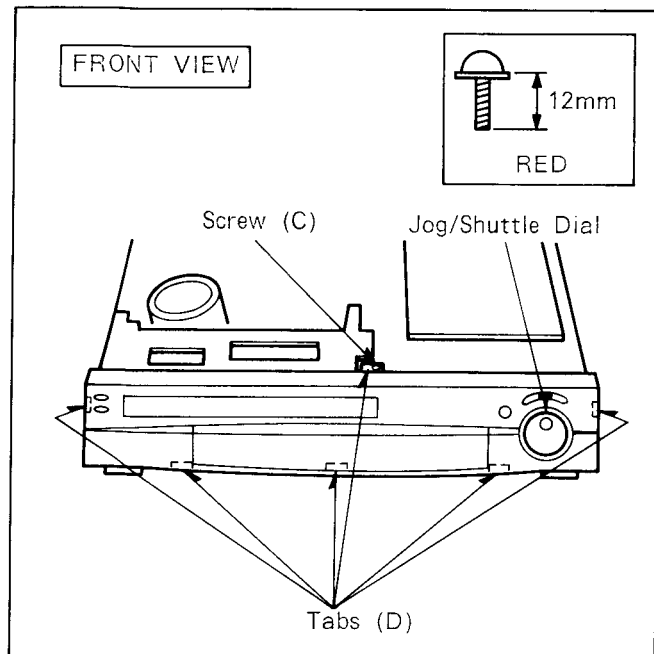


Fig. D4

4. REMOVAL OF THE TIMER C.B.A. & OPERATION C.B.A.

REMOVAL OF THE TIMER C.B.A.

Disconnect.....Connector(E)
Unlock.....6 Tabs(F)

REMOVAL OF THE OPERATION C.B.A. (NV-SD40EG/B only)

Disconnect.....Connector(E)
Unlock.....2 Tabs(G)

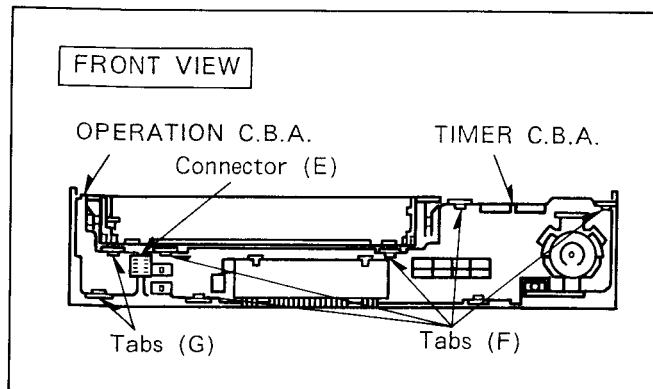


Fig. D5

5. REMOVAL OF THE MAIN C.B.A. & POWER SUPPLY UNIT

REMOVAL OF THE MAIN C.B.A.

Remove.....4 Screws(H),(I)
Unlock.....4 Tabs(J)

REMOVAL OF THE POWER SUPPLY UNIT

Remove.....2 Screws(H),(K)

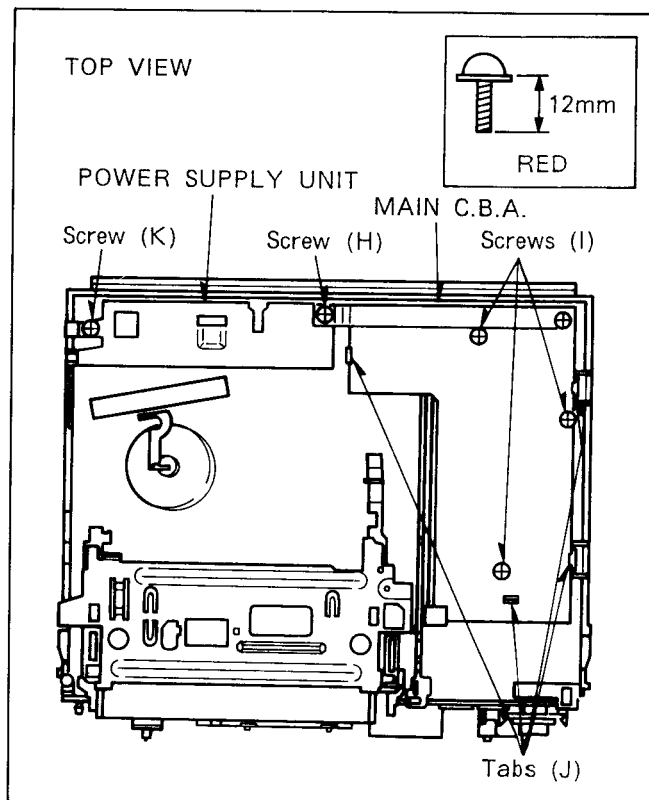


Fig. D6

6. PACK SERVICING POSITION

CAUTION:

Confirm that there is insulation between Mechanical Chassis and Main C.B.A. before connecting Mains AC.

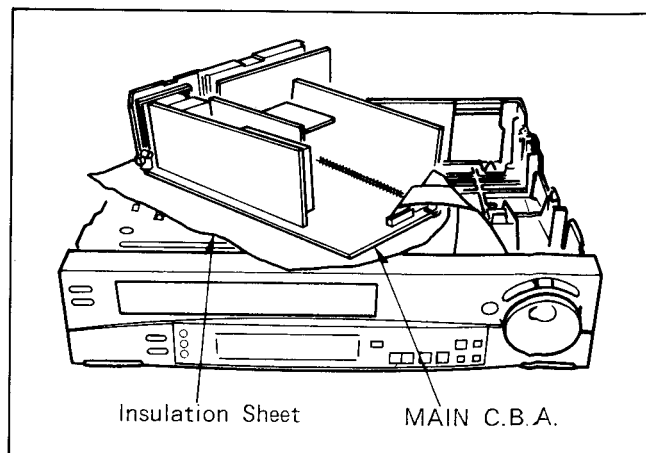


Fig. D7

7. REMOVAL OF THE CLEANER ARM UNIT

1. Unlock the locking portion(L).
2. Pull up the Cleaner Arm Unit.

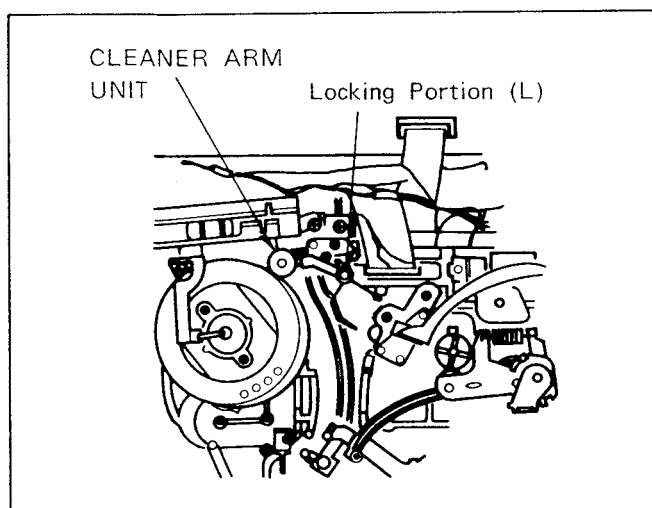


Fig. D8

2-2. MECHANICAL ADJUSTMENT PROCEDURES

2-2-1. TENSION POST POSITION ADJUSTMENT

(Equipment Required)
Hex Wrench (VFK0326)

1. Disconnect the AC plug.
2. Remove the TOP PLATE and CASSETTE HOLDER.
3. Turn the LOADING MOTOR until the loading completes.
4. Adjust the hole of TENSION BAND FASTENER by hex wrench so that the left edge of IMPEDANCE ROLLER and TENSION ARM UNIT as shown in Fig.M1.

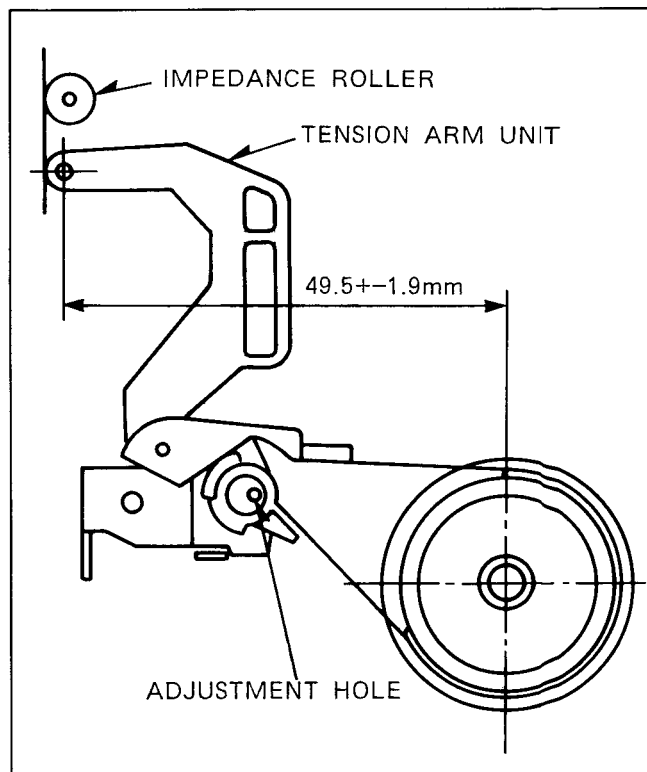


Fig. M1

2-2-2. BACK TENSION ADJUSTMENT

(Equipment Required)
Back Tension Meter (VFK0132)
VHS Cassette Tape (180 minutes tape:PAL)
(120 minutes tape:NTSC)

(Specification)
22.5-27.5g

1. Playback the cassette tape from the beginning and wait until the tape movement get the stabilization.
(for approx. 10~20 seconds)
2. Insert the Back tension Meter into the path of a tape, and measure the back tension to be within specification as shown in Fig.M2

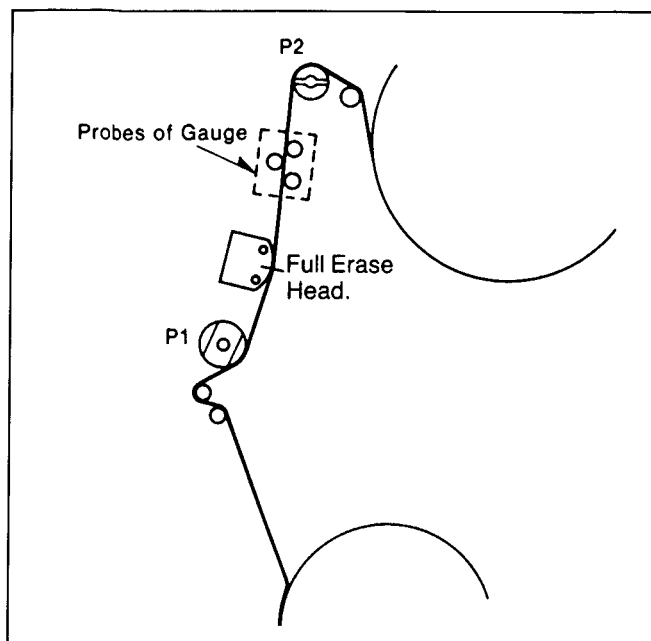


Fig. M2

3. If it is out of specification, change the spring notch as shown in Fig.M3.

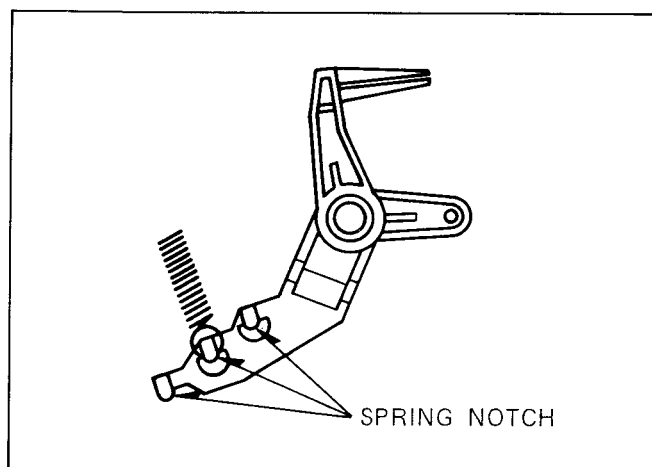


Fig. M3

2-2-3. P2 AND P3 POSTS ADJUSTMENT (PREADJUSTMENT)

(Equipment Required)
Post Adjustment Screwdriver (VFK0329)

1. Remove the TOP PLATE and CASSETTE HOLDER.
2. Turn the LOADING MOTOR until the unloading completes.
3. Loosen the fixing screw of P2 and P3 POSTS.
4. Rotate the P2 and P3 POSTS clockwise to the end.
5. Rotate the P2 and P3 POSTS twice counterclockwise.

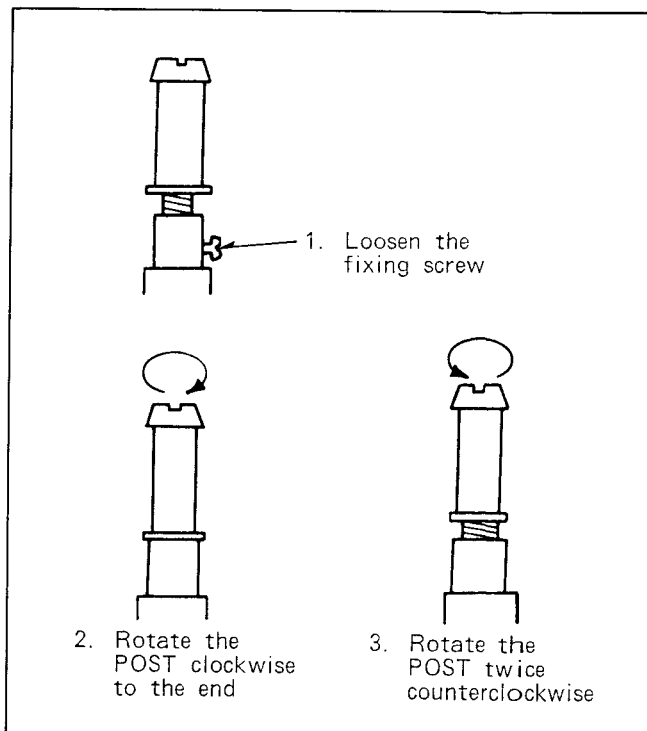


Fig. M4

6. Install the TOP PLATE and CASSETTE HOLDER
7. Playback the cassette tape and make sure that the edges of the tape are not curling at the bottom or top end of the P1, P2, P3 and P4 POSTS as shown in Fig.M5.

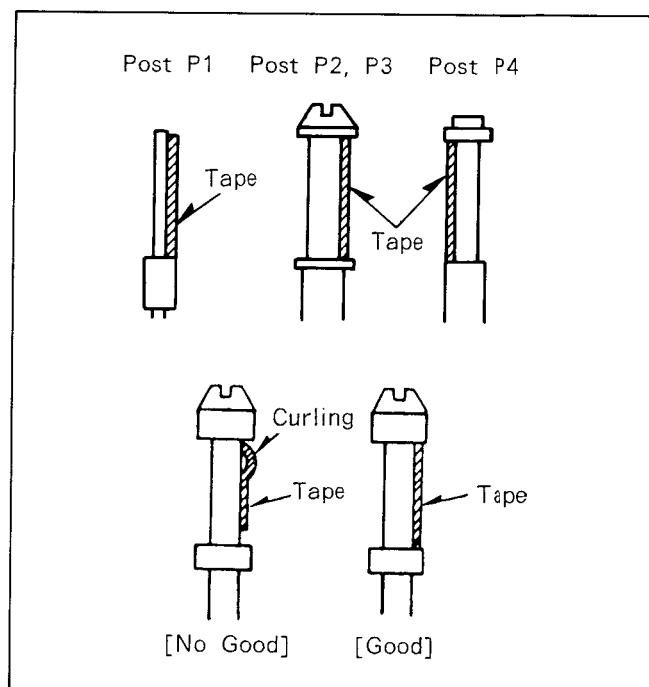


Fig. M5

8. If curling appears, readjusts the P2 and P3 POSTS.

2-2-4. TAPE INTERCHANGEABILITY ADJUSTMENT

Carry out the following procedures for Tape interchangeability Adjustment to do it correctly and smoothly.

- (1) Adjustment of P2 and P3 Posts.
- (2) Height Adjustment of A/C Head (1).
- (3) Height Adjustment of A/C Head (2).
- (4) Fine-Adjustment of A/C Head
- (5) Horizontal Position Adjustment of A/C Head.

If the Tape interchangeability Adjustment is not perfect, repeat the above procedures from (1) to (5).

CAUTIONS:

To make a Adjustment Mode for Tape Interchangeability, cut a Jumper Wire as shown in Fig.M6. Auto Tracking is turned off.

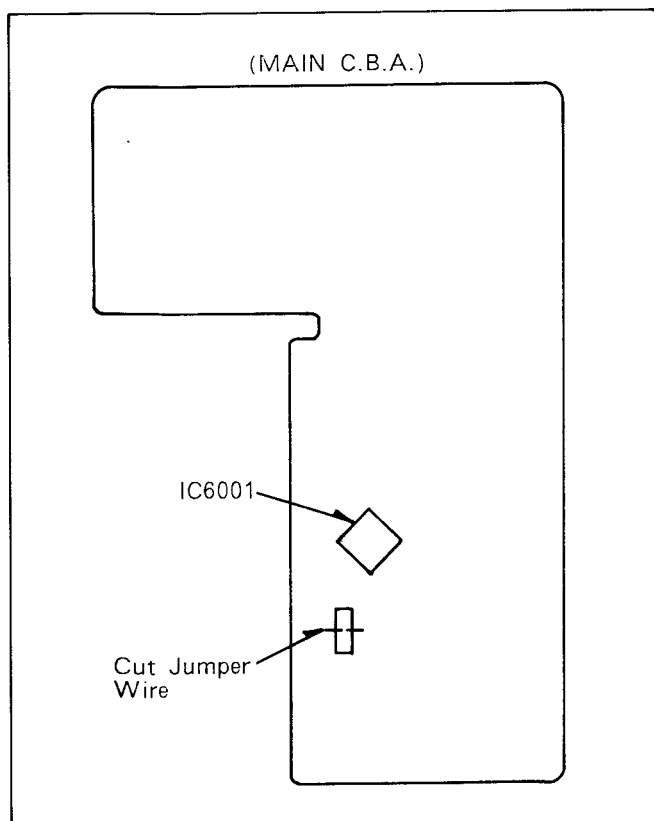


Fig. M6

(1) Adjustment of P2 and P3 Posts

(Equipment Required)

Alignment Tape(PAL/SECAM: VFJ8125H3F,
NTSC: VFM8080HQFP)
Post Adjustment Screwdriver (VFK0329)

1. Set the tracking control into the fix position. (by pressing the tracking (+) and (-) button simultaneously on the Remote Controller)
And connect the oscilloscope to the output of the Head Amp as shown in Fig.M7.

Note:

To get a stable waveform of the Head Amp output on the oscilloscope, use the head switching pulse as a triggering signal as shown in Fig.M7.

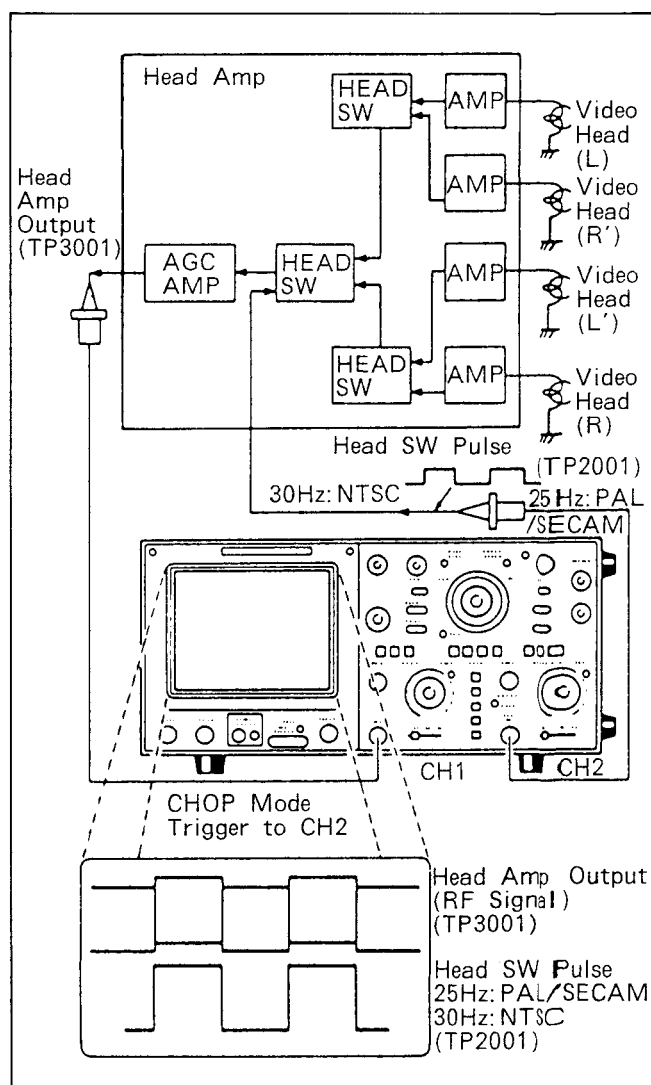


Fig. M7 Connect of Oscilloscope

2. Playback the alignment tape.
3. If the RF envelope appears like example "A" or "B" in Fig.M8 then adjustment of the tape guide post (P2:Entrance) is necessary.
4. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Fig.M8—"C".

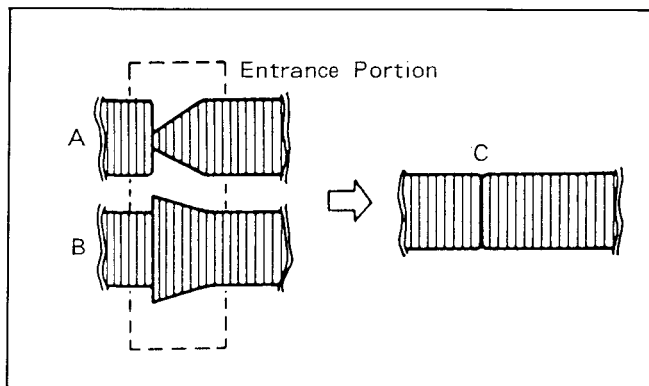


Fig. M8

5. If the RF envelope appears like example "D" or "E" in Fig.M9, then adjustment of the tape guide post (P3:Exit) is necessary.
6. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Fig.M9—"F".

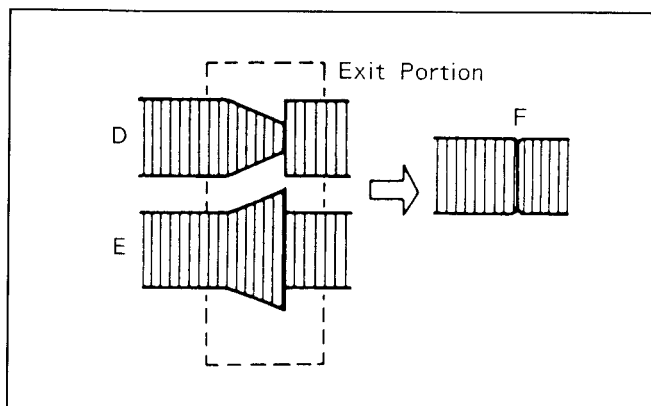


Fig. M9

7. Turn the Tracking VR fully clockwise and counter clockwise. (Keep pressing + button or - button on the Remote Controller) The output envelope should vary nearly parallel with other condition as shown in Fig.M10.
8. Set the tracking control into centre fix position and adjust for maximum RF envelope, whilst being as flat as possible.

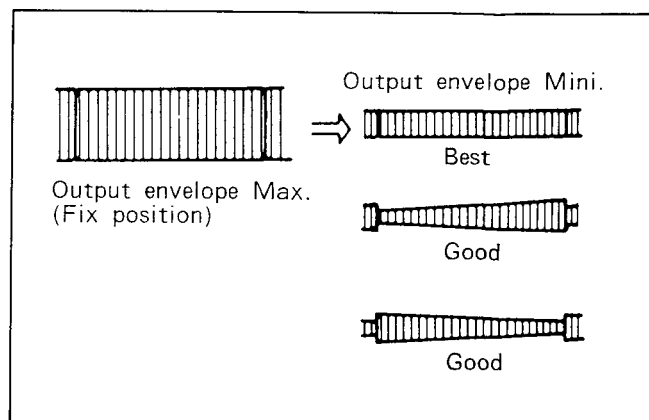


Fig. M10

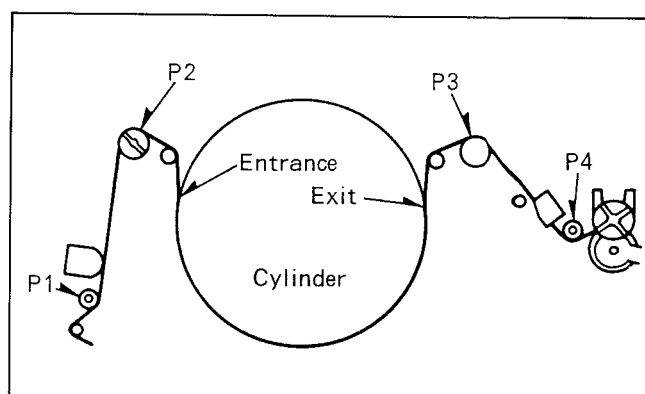


Fig. M11 Loading of Posts

(2) Height Adjustment of A/C Head (1)

- 1) Install the A/C HEAD on the A/C HEAD BASE(E) by 3 screws (A),(B) and (C) with springs.
- 2) Tighten the screw (A) until it touches chassis and then rotate the SCREW (A) counterclockwise for approx. 1.5 times.
- 3) Rotate the 2 screws(B) and (C) until A/C HEAD BASE(D) and (E) is separate.

CAUTION:
When adjusting the Screws (B) and (C) on the A/C HEAD BASE(E), do not touch the Screw Driver to the face of the A/C HEAD.

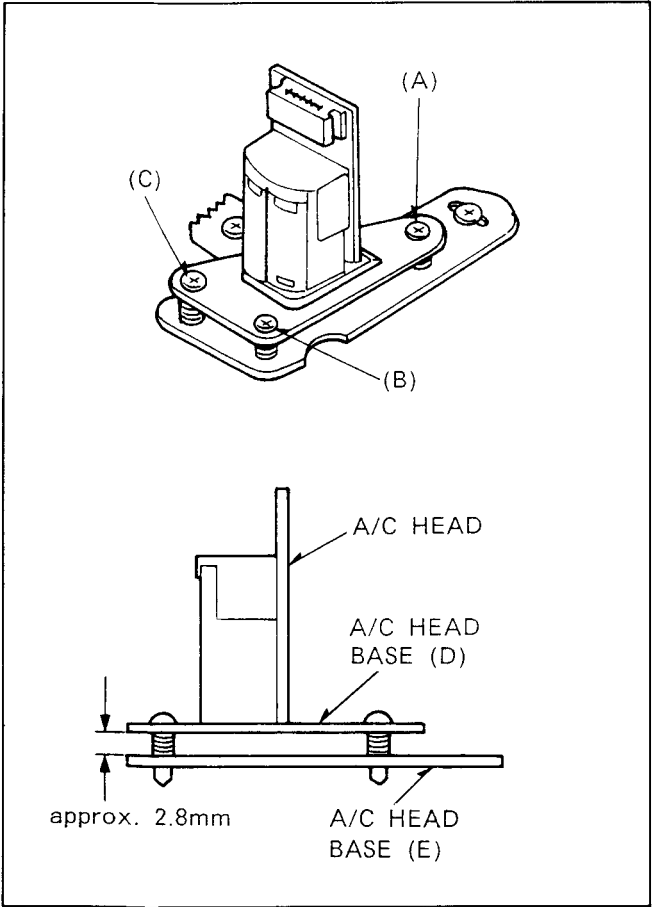


Fig. M12

(3) Height Adjustment of A/C Head (2)

- 1) Playback the alignment tape.
- 2) Rotate the screw (A) or (B) until the wrinkle appears on the lower edge of tape at P4 post.
- 3) Rotate the screw (A) or (B) until the wrinkle just disappears on the lower edge of tape at P4 post.
- 4) Connect the oscilloscope to audio output terminal.
- 5) Rotate the screw (C) until audio signal is maximized.

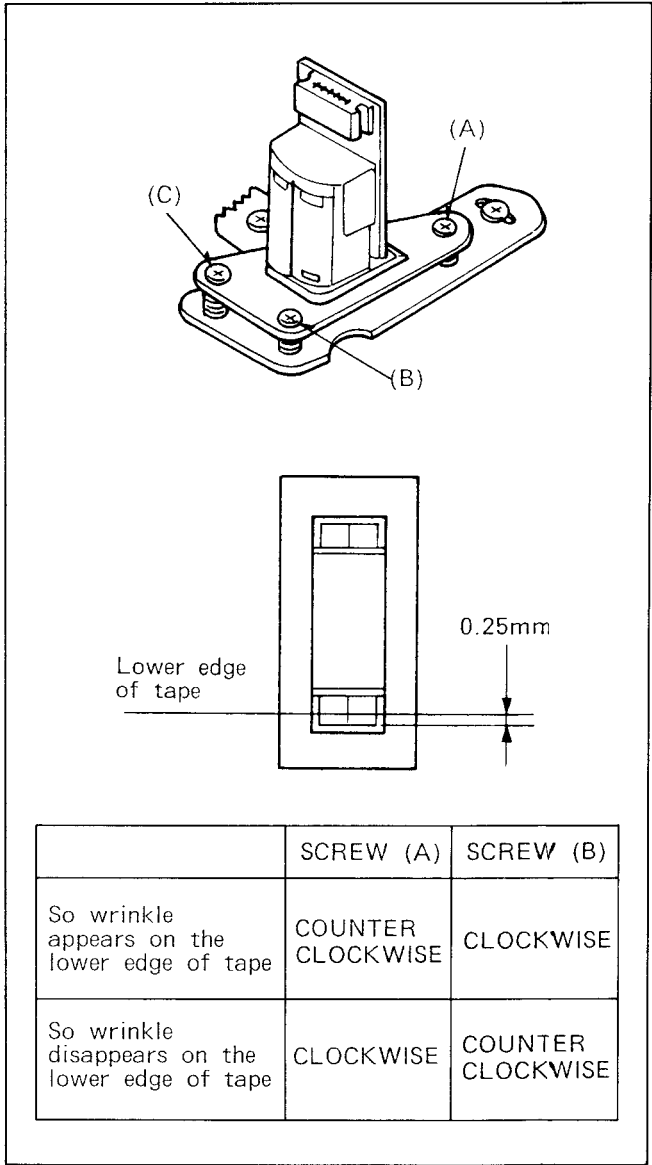


Fig. M13

(4) Fine-Adjustment of A/C HEAD

<When moving the A/C HEAD up>

- 1) Rotate the screw (A) counterclockwise until the wrinkle appears on the lower edge of tape at P4 post.
- 2) Rotate the screw (B) counterclockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
- 3) Rotate the screw (C) counterclockwise until the audio signal is maximized.

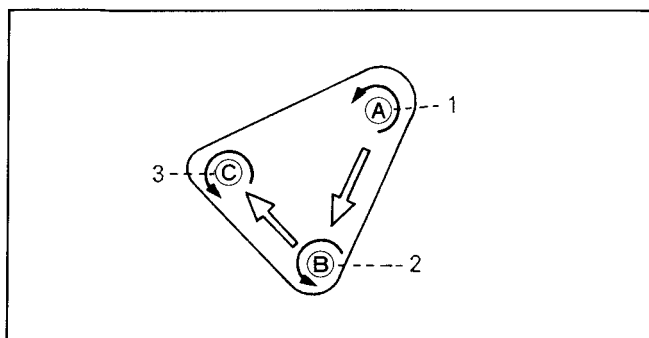


Fig. M14

<When moving the A/C HEAD down>

- 1) Rotate the screw (B) clockwise until the wrinkle appears on the lower edge of tape at P4 post.
- 2) Rotate the screw (A) clockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
- 3) Rotate the screw (C) clockwise until the audio signal is maximized.

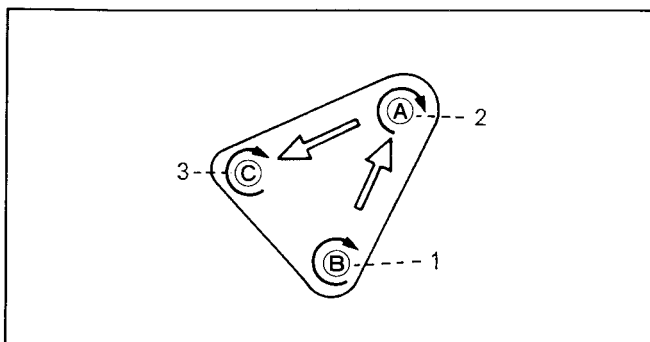


Fig. M15

(5) Horizontal Position Adjustment of A/C HEAD

- 1) Set the tracking control into the centre fix position. (by pressing the tracking (+) and (-) button simultaneously on the Remote Controller)
- 2) Connect the oscilloscope to the output of the Head Amp as shown in Fig.M7.
- 3) Playback the alignment tape.
- 4) Loosen the 2 screws (F) and (G).
- 5) Adjust the A/C HEAD BASE (E) until the RF envelope waveform is maximized.

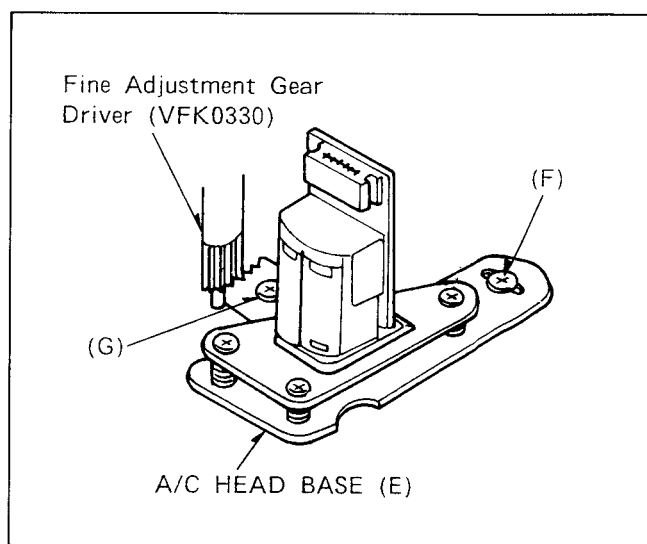


Fig. M16

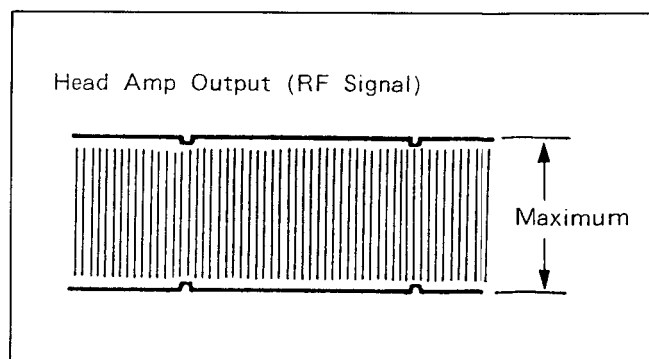
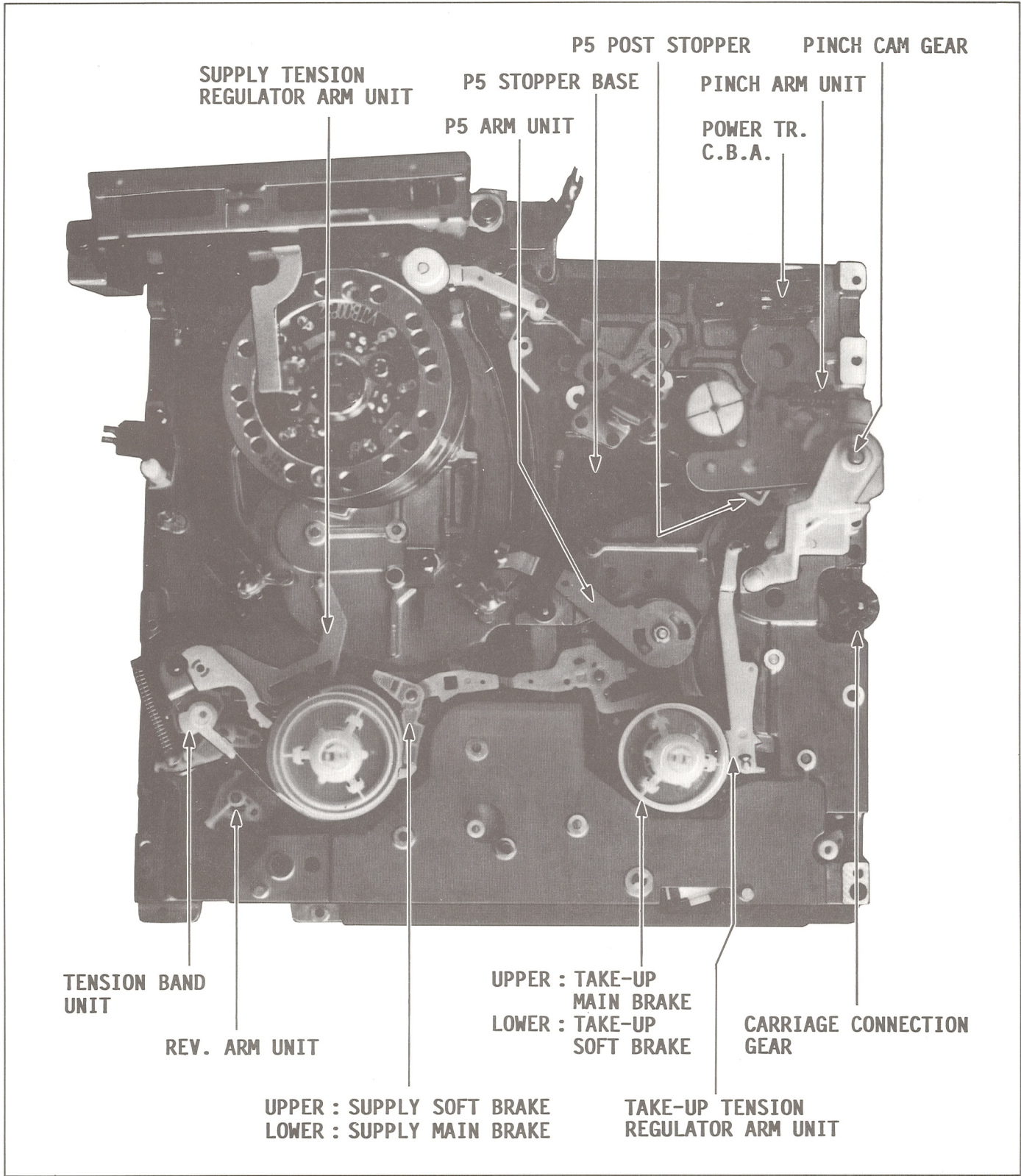


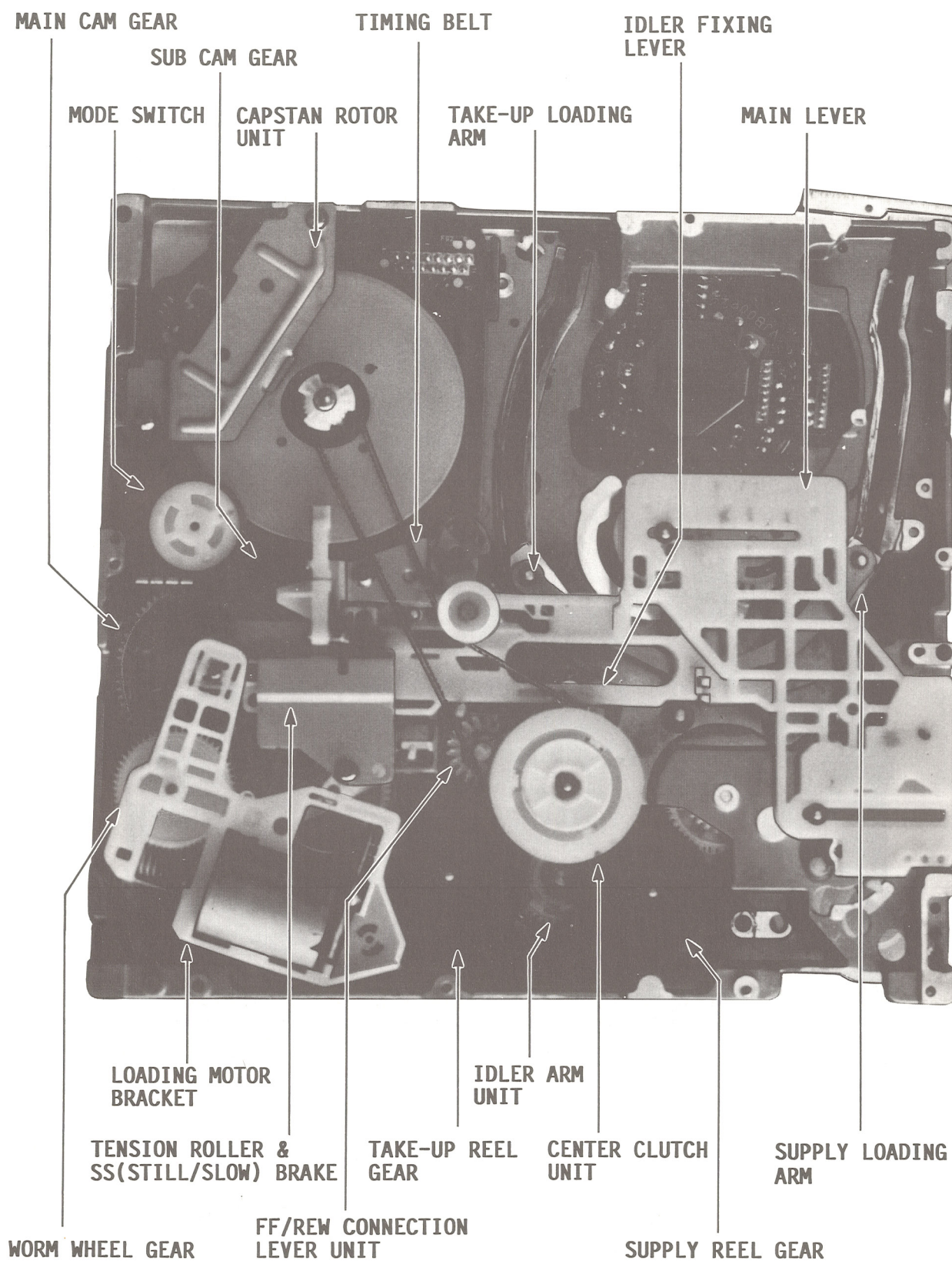
Fig. M17

2-3. DISASSEMBLY PROCEDURES OF MECHANISM

In order to remove the mechanism components it is first necessary to remove the mechanism chassis.



Top View of K Mechanism



Bottom View of K Mechanism

2-3-1. REMOVAL OF THE MECHANISM CHASSIS

- 1) Remove the 2 screws(A) push the HOLDER PLATE slightly to the rear of mechanism.
- 2) Remove the screw(B).
- 3) Disconnect all cables and connectors on the mechanism chassis and connector P6003 on the MAIN C.B.A.(connecting to DEW SENSOR). (Use extreme care when disconnecting the P1508)
- 4) Lift the mechanism chassis out of the unit.

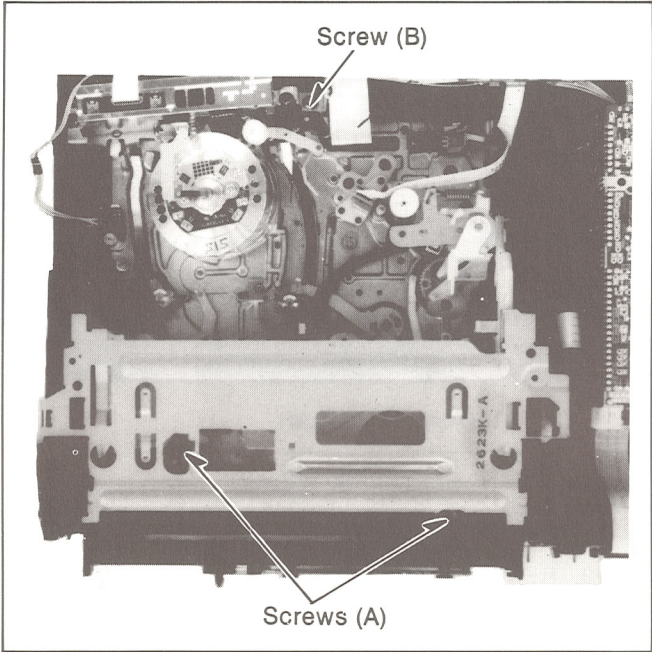


Fig. A1

2-3-2. REMOVAL OF THE MECHANISM CONNECTION C.B.A.

- 1) Remove the 4 screws(C).
- 2) Lift up on the C.B.A.

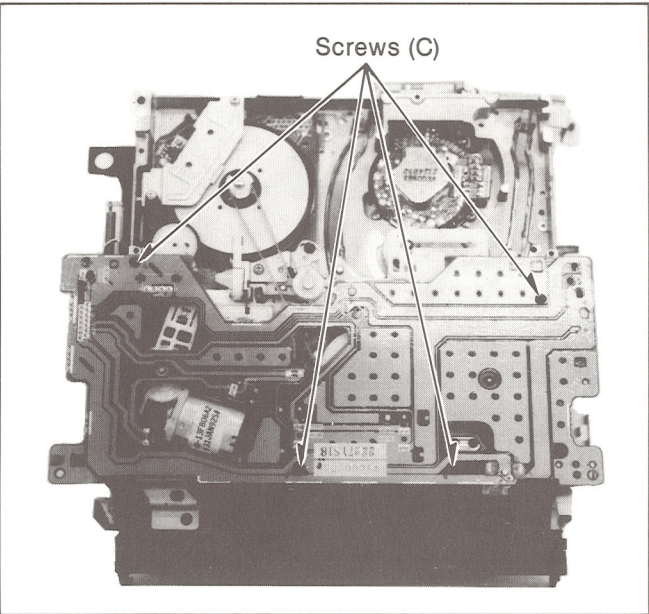


Fig. A2

2-3-3. REMOVAL OF THE TENSION ROLLER AND SS BRAKE

- 1) Remove the 2 screws(D).
- 2) Remove the TENSION ROLLER and the SS BRAKE.

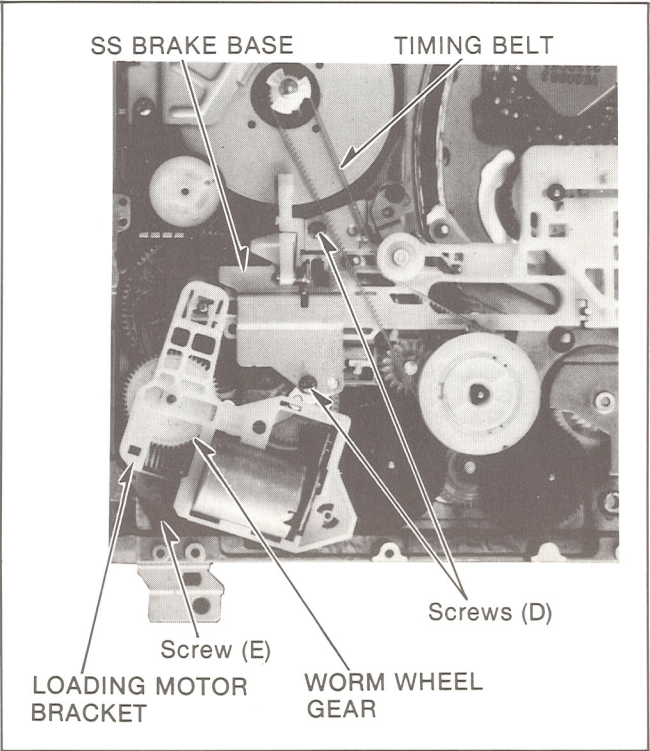


Fig. A3

2-3-4. REMOVAL OF THE TIMING BELT

- 1) Remove the TIMING BELT.

2-3-5. REMOVAL OF THE LOADING MOTOR BRACKET

- 1) Remove the screw(E) as shown in Fig.A3.
- 2) Disconnect the locking tab on the right by pushing the locking tab in as shown in Fig.A4.
- 3) Lift up on the LOADING MOTOR BRACKET and push the BRACKET towards the MAIN CAM GEAR as shown in Fig.A3.
- 4) Lift the WORM WHEEL GEAR off the shaft.

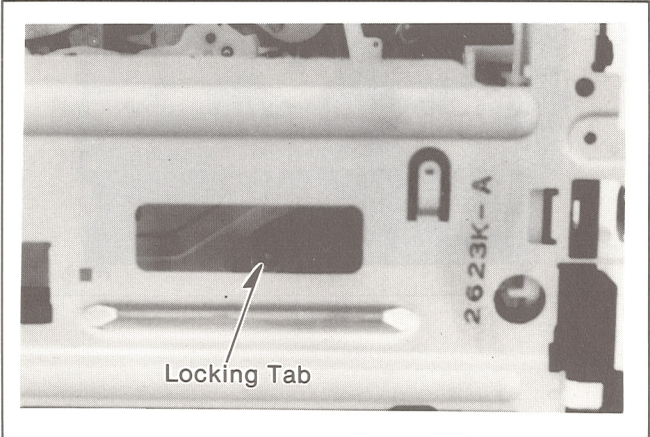


Fig. A4

2-3-6. REMOVAL OF THE MAIN LEVER UNIT

- 1) Remove the 2 cut washers.
- 2) Remove the MAIN LEVER UNIT.

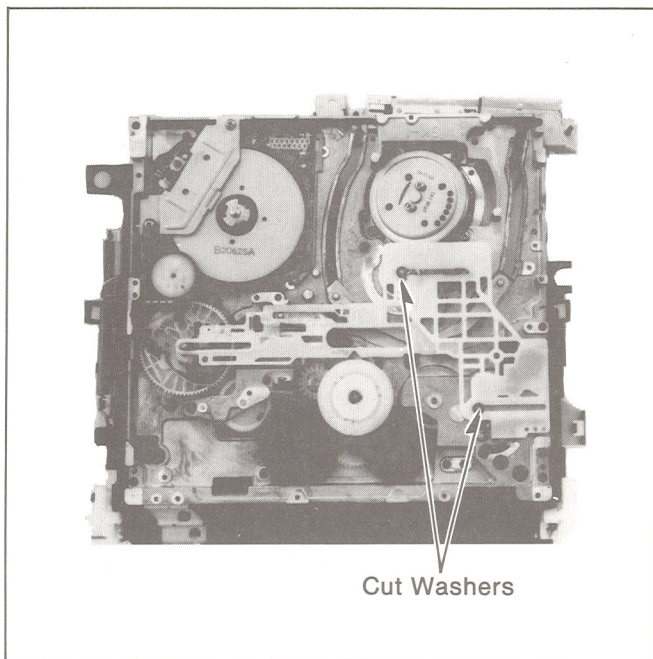


Fig. A5

2-3-8. REMOVAL OF THE MODE SWITCH

- 1) Remove screw(F).
- 2) Remove the MODE SWITCH.

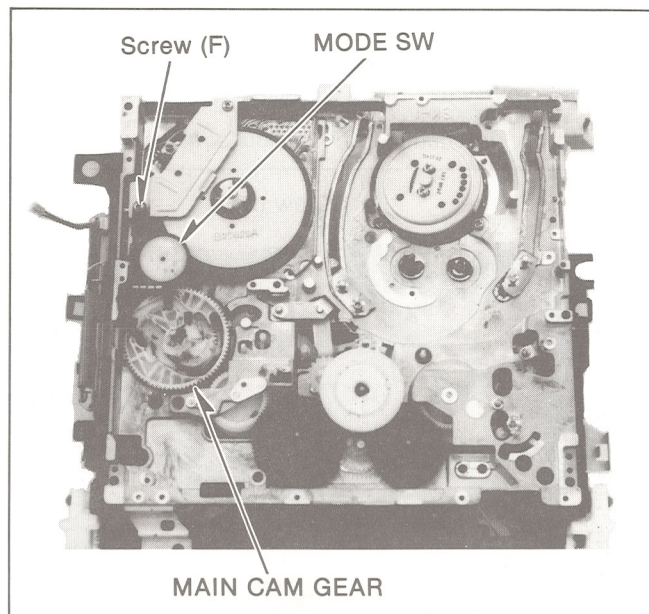


Fig. A7

2-3-7. REMOVAL OF THE TAKE-UP AND SUPPLY LOADING ARMS

- 1) Remove the TAKE-UP and SUPPLY LOADING GEARS by lifting them up off the post.

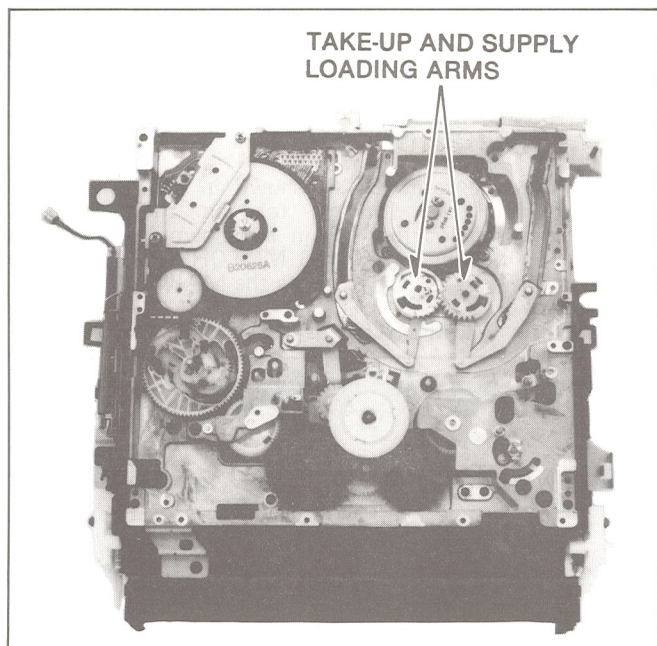


Fig. A6

2-3-9. REMOVAL OF THE MAIN CAM GEAR

- 1) Lift the MAIN CAM GEAR off the shaft.

2-3-10. REMOVAL OF THE CAPSTAN ROTOR UNIT

- 1) Remove the screw(G) and remove the CAPSTAN STOPPER as shown in Fig.A8.

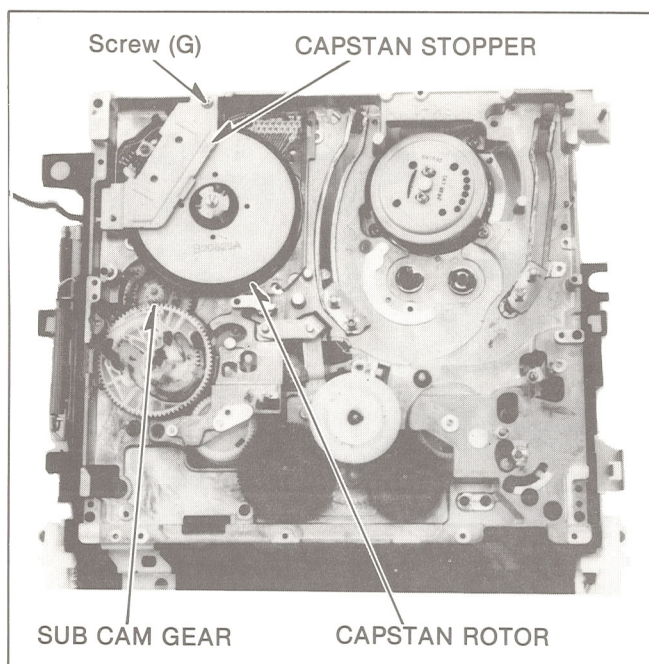


Fig. A8

- 2) Pull out the CAPSTAN ROTOR.
(When the CAPSTAN ROTOR is removed, 2 OIL SEALS are left in the CAPSTAN ROTOR HOUSING Fig.A9.. To avoid losing the OIL SEALS, place them back on the CAPSTAN SHAFT.)

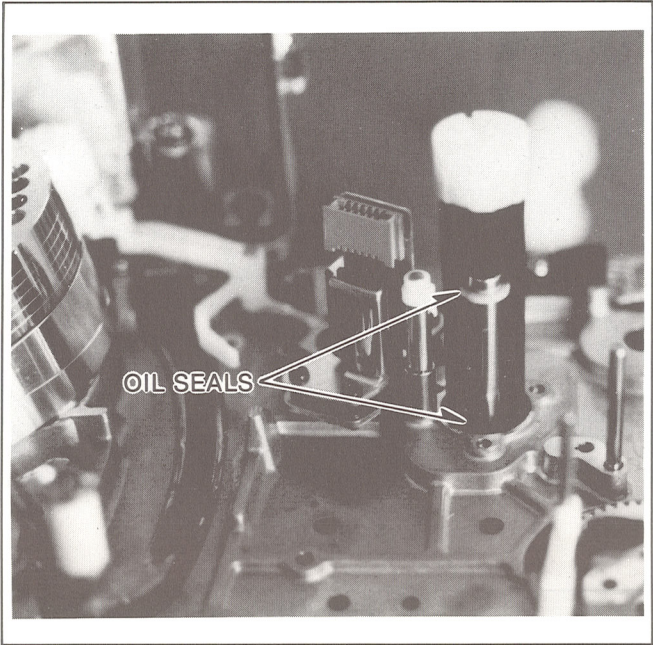


Fig. A9

- 3) Remove the 3 screws(H) and remove the CAPSTAN STATOR as shown in Fig.A10.

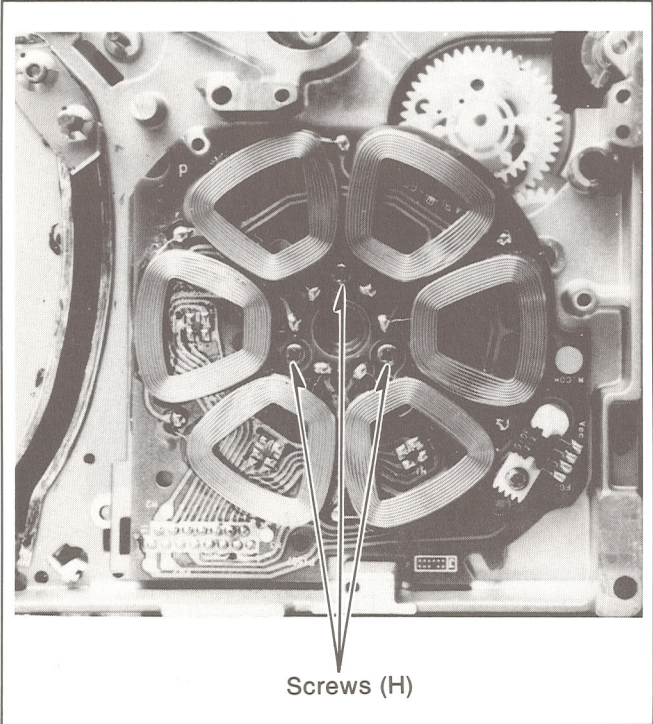


Fig. A10

2-3-11. REMOVAL OF THE SUB CAM GEAR

- 1) Lift the SUB CAM GEAR off the shaft.

2-3-12. REMOVAL OF THE CENTRE CLUTCH

- 1) Remove the cut washer.
- 2) Remove the CENTRE CLUTCH.

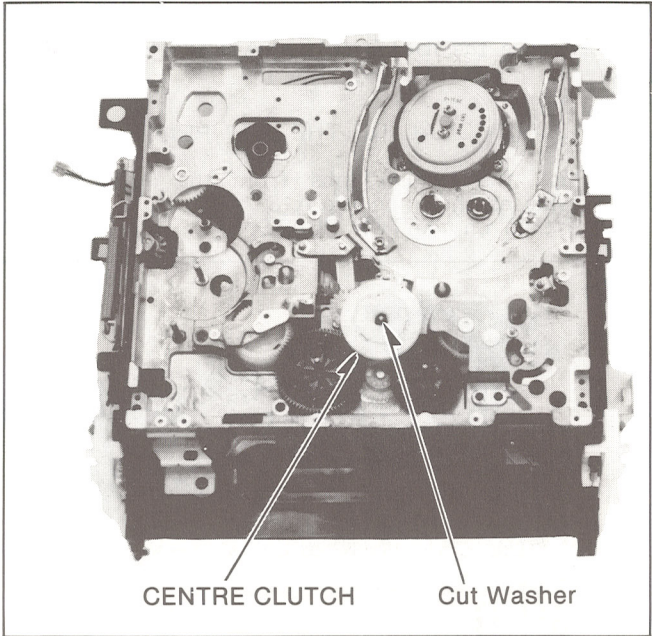


Fig. A11

2-3-13. REMOVAL OF THE TAKE-UP AND SUPPLY REEL GEARS

- 1) Unlock the locking tab and lift up on the reel.

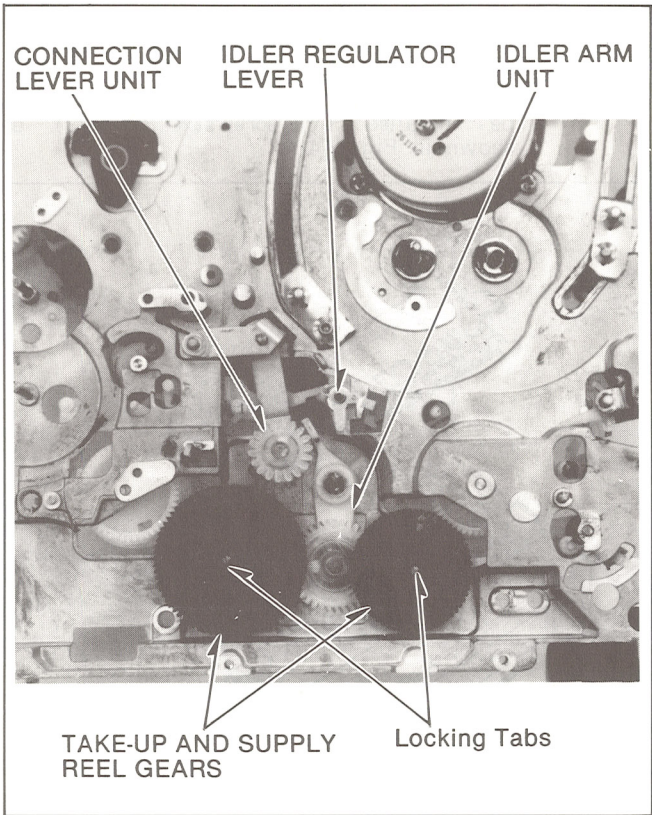


Fig. A12

2-3-14. REMOVAL OF THE IDLER ARM UNIT, CONNECTION LEVER UNIT AND IDLER REGULATOR LEVER

- 1) Lift the IDLER ARM UNIT and CONNECTION LEVER UNIT off the shaft.
- 2) Remove the IDLER REGULATOR LEVER.

2-3-15. REMOVAL OF THE TOP PLATE

- 1) Push the locking tabs from the outer side to inside as shown in Fig.A13.
- 2) Lift up on the TOP PLATE.

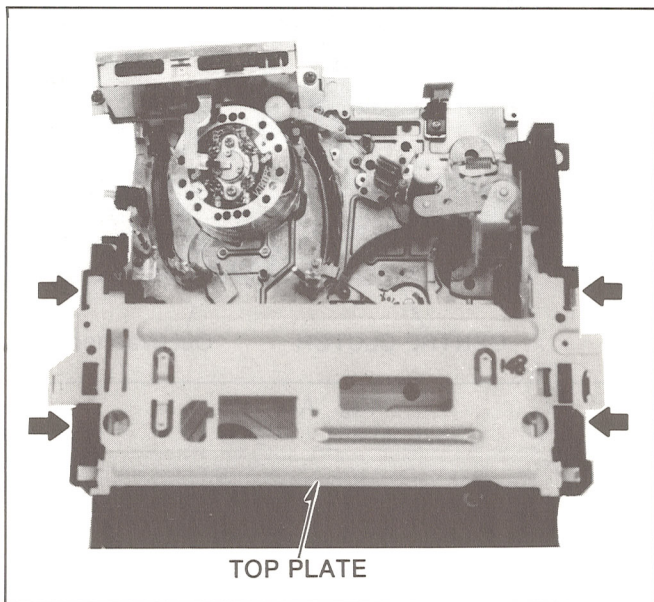


Fig. A13

NOTE:

If locking tab is broken, TOP PLATE can be installed by screws(XTB26+8G) as shown in Fig.A14.

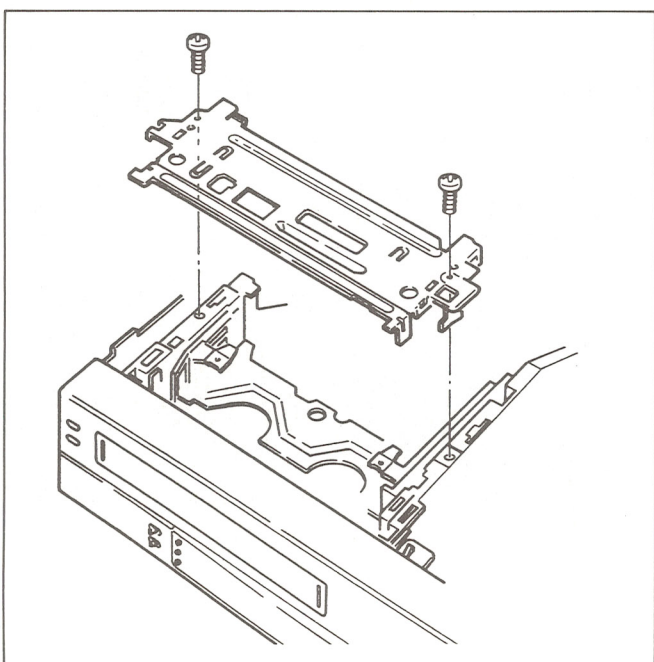


Fig. A14

2-3-16. REMOVAL OF THE CASSETTE HOLDER

- 1) Slide the HOLDER PLATE in the rear and lift up.
- 2) Remove the 4 screws(I).
- 3) Remove the CASSETTE HOLDER.

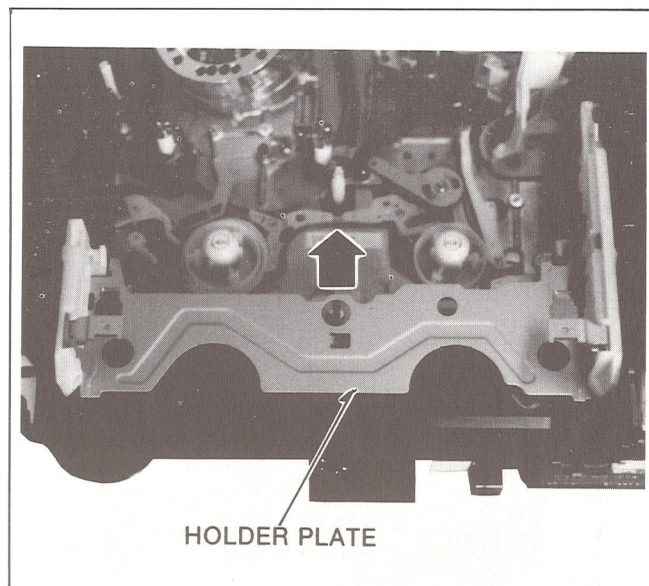


Fig. A15

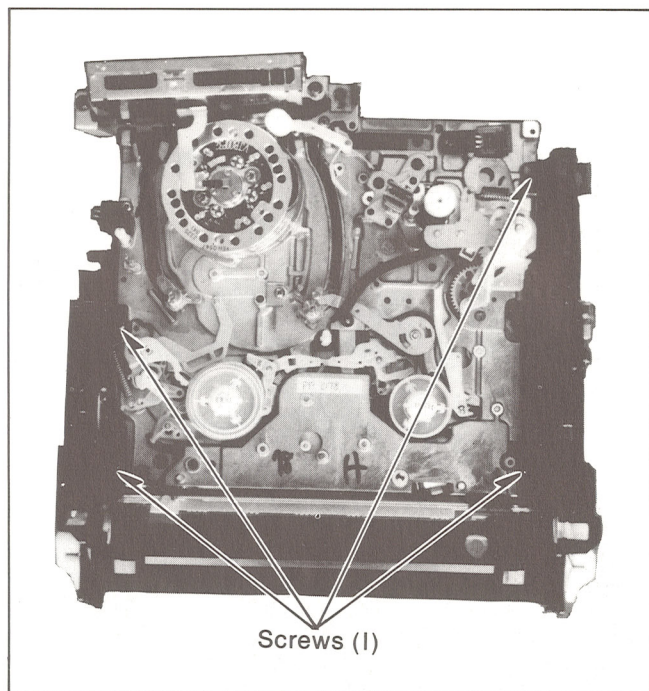


Fig. A16

2-3-17. REMOVAL OF THE PINCH ARM UNIT

- 1) Unlock the locking tab on the OPENER PIECE and remove it from the shaft.
- 2) Remove the PINCH ARM UNIT from the shaft.

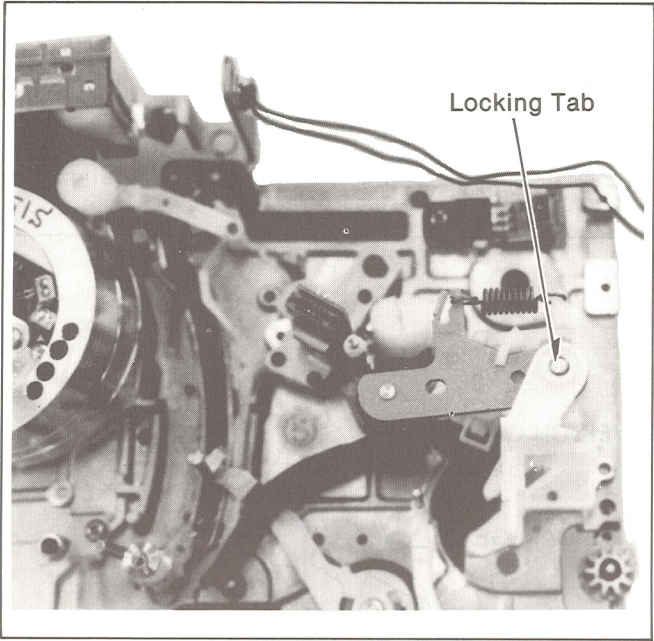


Fig. A17

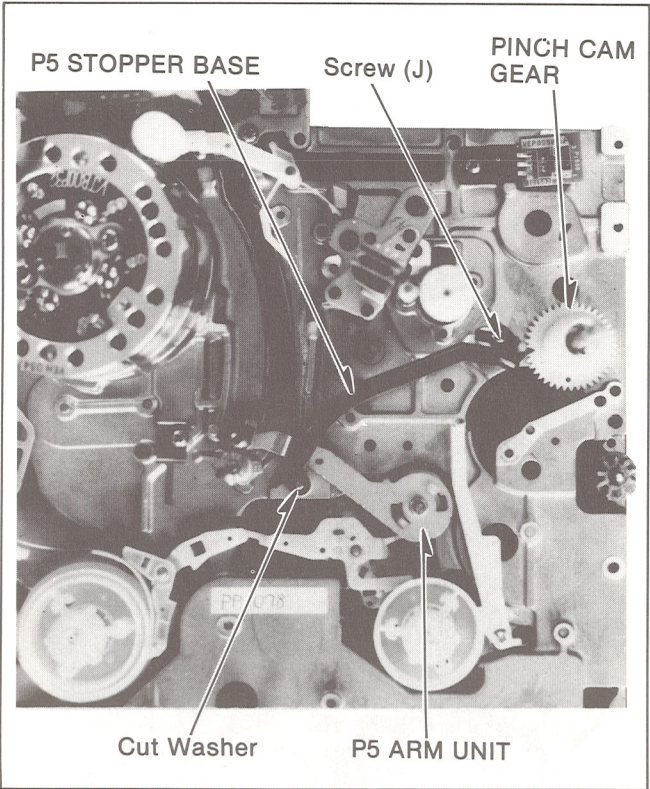


Fig. A19

2-3-18. REMOVAL OF THE PINCH CAM GEAR AND P5 ARM UNIT

- 1) Unlock the locking tab of the P5 STOPPER and remove the P5 STOPPER.
- 2) Remove the screw(J) and the cut washer.
- 3) Remove the P5 STOPPER BASE.
- 4) Remove the PINCH CAM GEAR and P5 ARM UNIT.

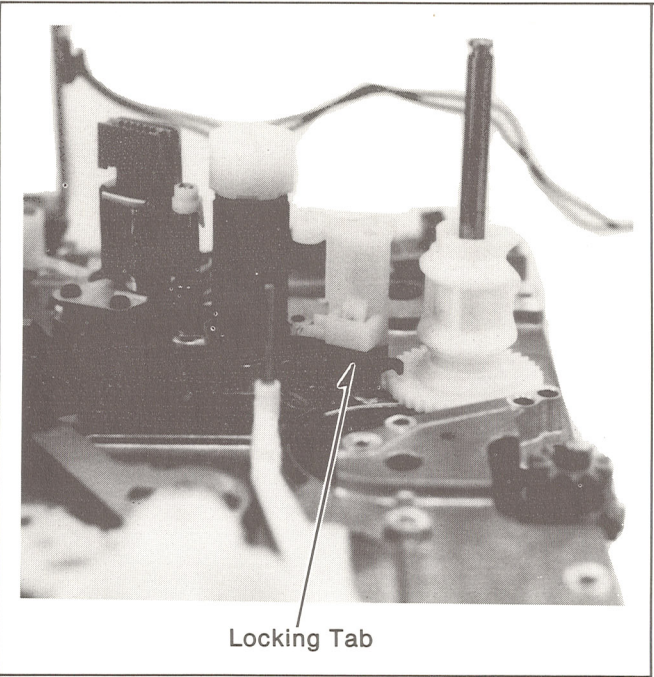


Fig. A18

2-3-19. REMOVAL OF THE TAKE-UP TENSION REGULATOR ARM UNIT

- 1) Disconnect the spring from the bottom of the chassis.
- 2) Unlock the locking tab and lift the TAKE-UP TENSION REGULATOR ARM UNIT off the shaft.

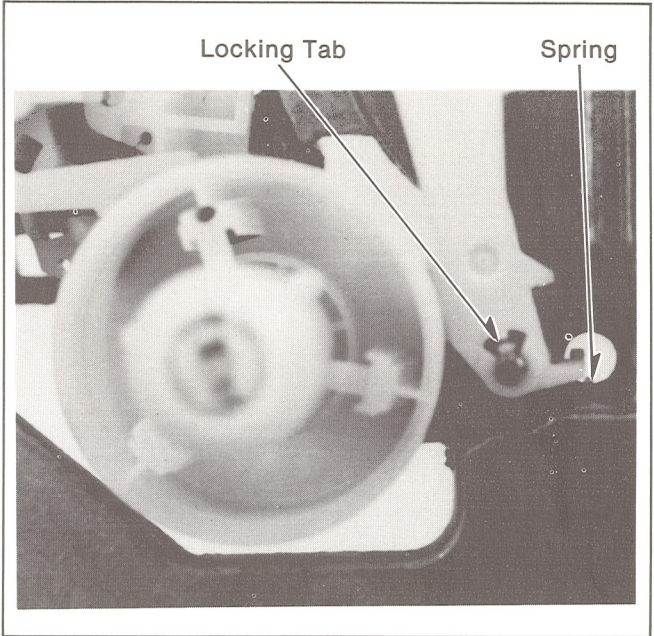


Fig. A20

2-3-20. REMOVAL OF THE CARRIAGE CONNECTION GEAR

- 1) Remove the cut washer.
- 2) Lift the CARRIAGE CONNECTION GEAR off the shaft.

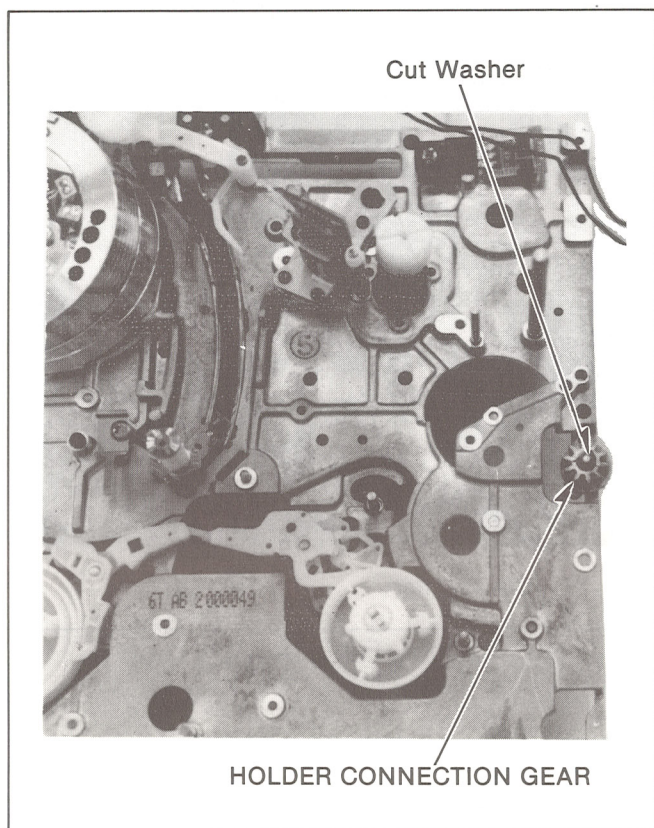


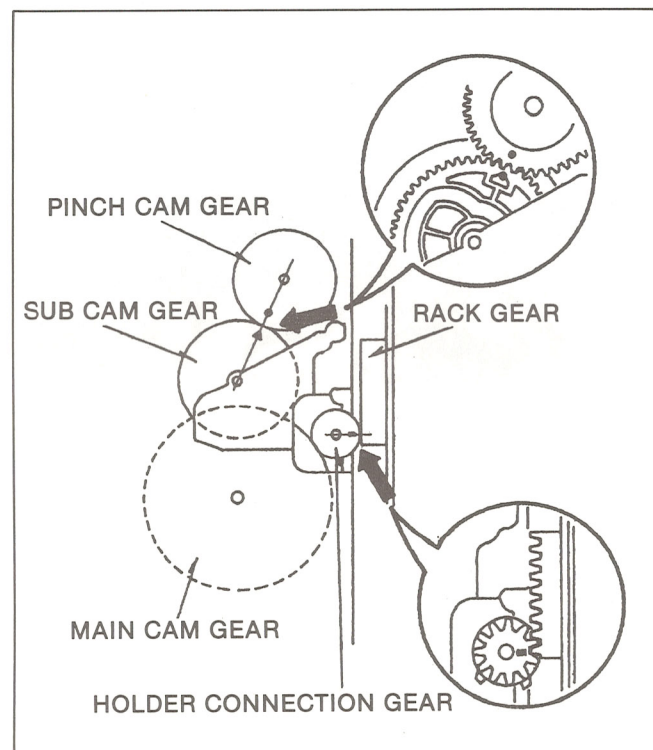
Fig. A21

2-4. ASSEMBLY PROCEDURES OF MECHANISM

2-4-1. VIEW OF PHASE ALIGNMENT

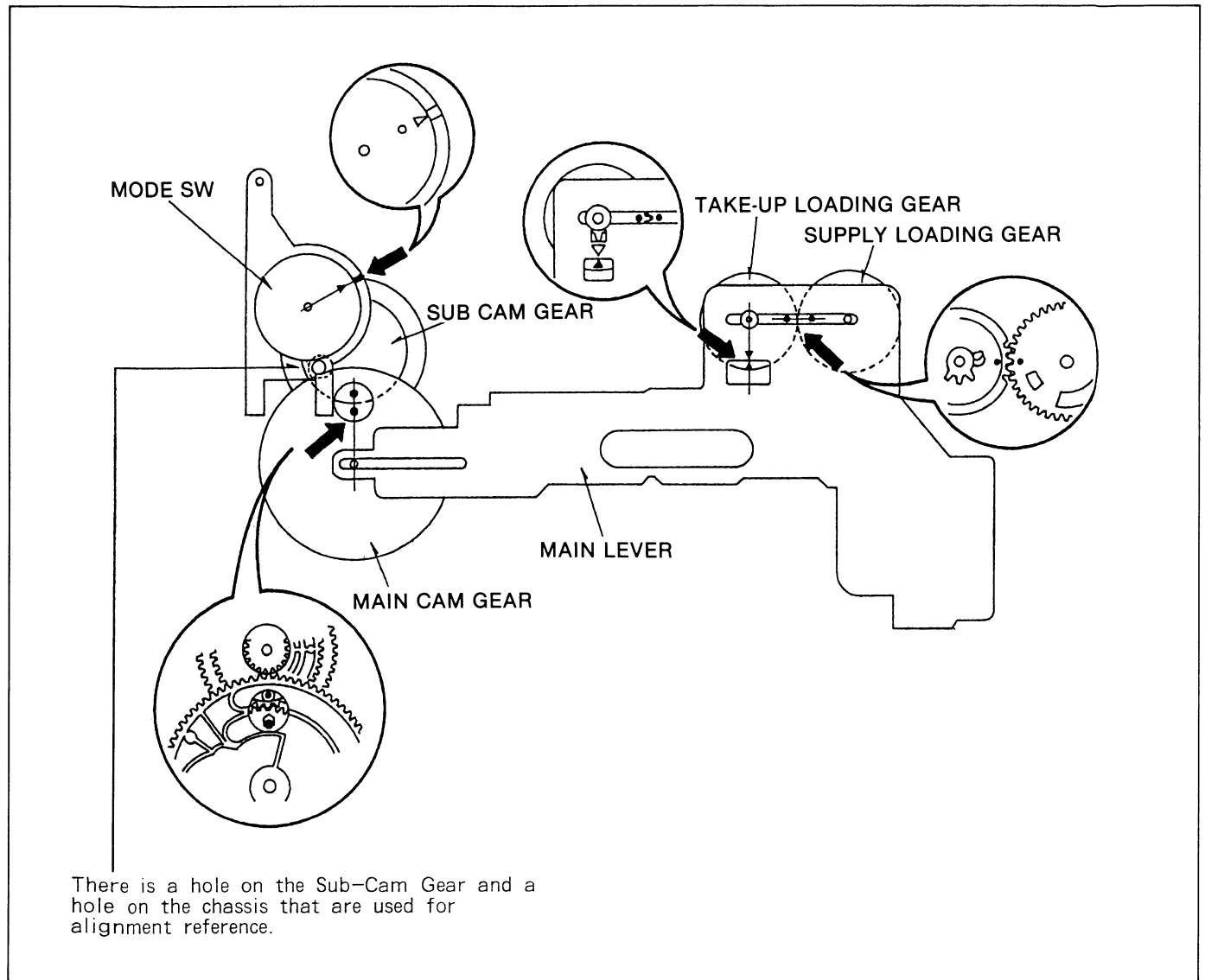
The gear phase alignment is performed in the cassette down position and is crucial for the K-Mechanism to operate correctly.

- 1) Top View of Gear Phase Alignment Marks.
There are alignment marks on the Pinch Cam Gear and Sub Cam Gear. There is one alignment mark on the carriage connection gear.



Top View of Gear Phase Alignment

- 2) Bottom View of Gear Phase Alignment Marks.
 There are alignment marks on Take-up Loading Gear and Supply Loading Gear.
 There is an additional mark on the Take-up Loading Gear that aligns with the mark on the main lever. There are alignment marks on the Main Cam Gear and the Sub Cam Gear. The mode switch gear mark aligns with a notch in the mode switch frame.



Bottom View of Gear Phase Alignment

2-4-2. ASSEMBLY OF THE CARRIAGE CONNECTION GEAR

- 1) Install the CARRIAGE CONNECTION GEAR as shown in Fig.A21.
- 2) Install the cut washer.

2-4-3. ASSEMBLY OF THE TAKE-UP TENSION REGULATOR ARM UNIT, P5 ARM UNIT PINCH CAM GEAR, P5 STOPPER BASE, P5 STOPPER, PINCH CAM UNIT AND OPENER PIECE

- 1) Install the TAKE-UP TENSION REGULATOR ARM UNIT.
- 2) Hook the spring to hole on the chassis.
- 3) Install the P5 ARM UNIT and PINCH CAM GEAR.
- 4) Install the P5 STOPPER BASE with cut washer and screw(J).
- 5) Install the P5 STOPPER, PINCH ARM UNIT and OPENER PIECE.

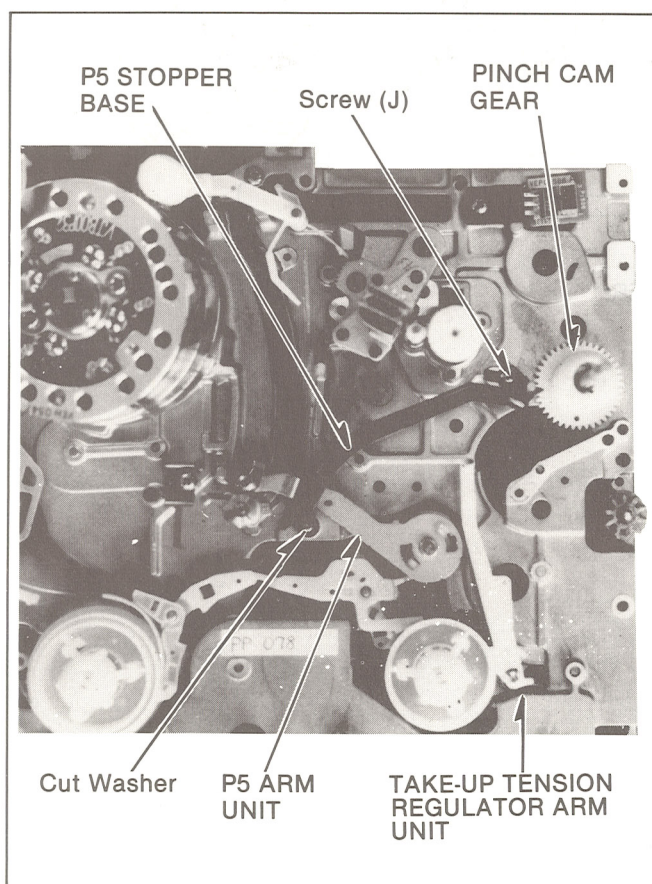


Fig. K1

2-4-4. ASSEMBLY OF THE IDLER ARM UNIT, TAKE-UP AND SUPPLY REEL GEARS, IDLER REGULATOR LEVER, CONNECTION LEVER UNIT AND CENTRE CLUTCH

- 1) Install the IDLER UNIT, TAKE-UP and SUPPLY REEL GEARS, IDLER REGULATOR LEVER and CONNECTION LEVER UNIT.
- 2) Install the CENTRE CLUTCH with cut washer.

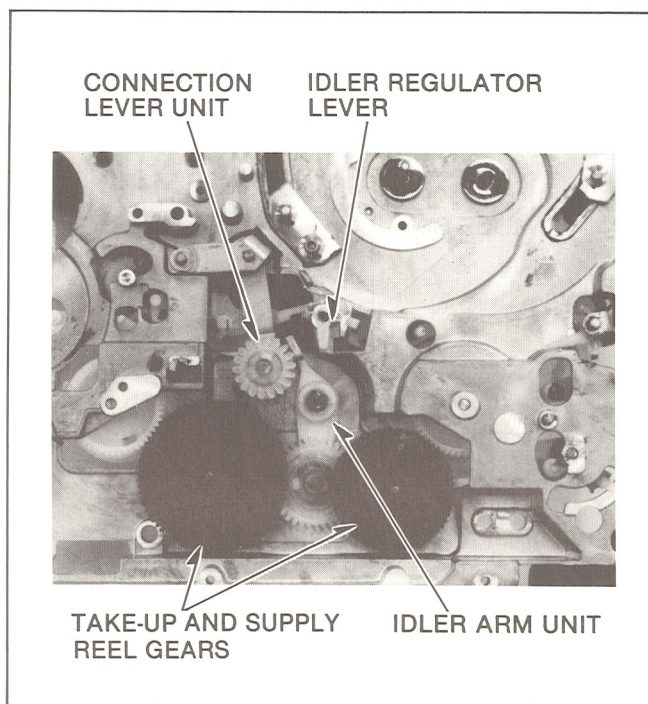


Fig. K2

2-4-5. ASSEMBLY OF THE SUB CAM GEAR

The SUB CAM GEAR is used for the reference of the phase.

- 1) Install the SUB CAM GEAR so that the chassis hole aligns with hole in the SUB CAM GEAR. Also, the hole in the outer gear of the SUB CAM GEAR must align with the hole in the PINCH CAM GEAR. The boss on the PINCH ARM must be installed in the cam groove of the SUB-CAM GEAR. This is used for the reference of the phase. To aid installation of the SUB-CAM GEAR insert a fixing pin into the holes of the SUB-CAM GEAR and the chassis.

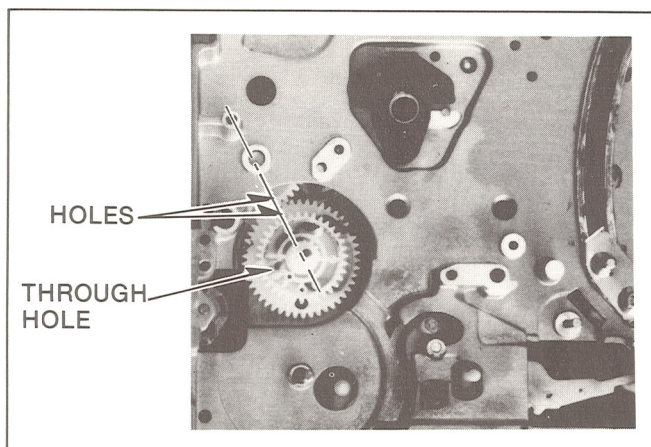


Fig. K3

2-4-6. ASSEMBLY OF THE STATOR UNIT

- 1) Place the STATOR UNIT into position. Loosely reinstall the 3 screws that secure the STATOR and HOUSING UNIT. Next insert the CENTERING PIN then tighten the 3 screws as shown in Fig.K4.

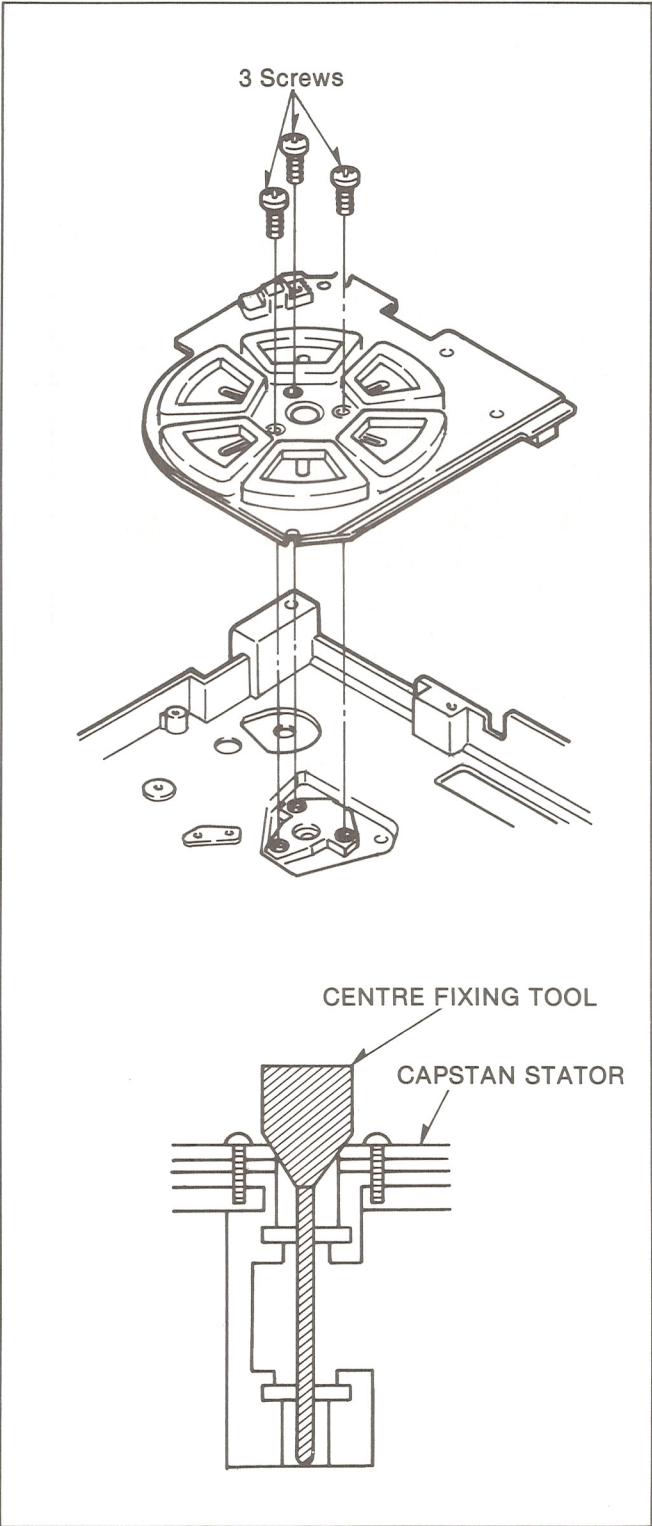


Fig. K4

- 2) Remove the oil seal from the ROTOR SHAFT. Partially install the ROTOR SHAFT into the lower position and install the oil seal. Insert the ROTOR SHAFT further into the housing and install the second OIL SEAL in the upper position. Push the lower OIL SEAL down the ROTOR SHAFT into the housing.

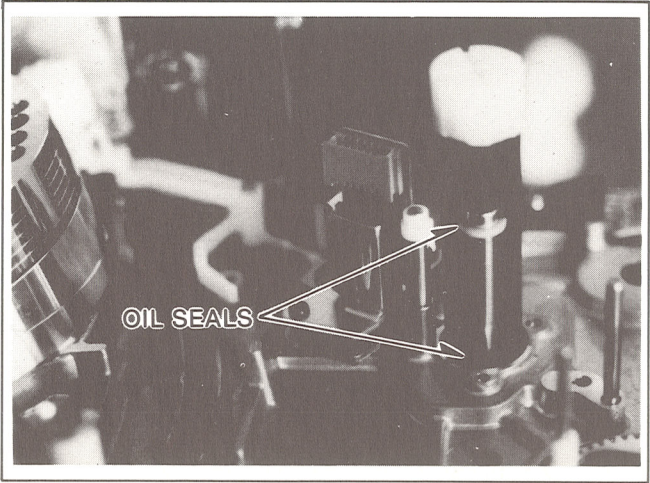


Fig. K5

- 3) Clean the ROTOR SHAFT after replacement. Reinstall the ROTOR STOPPER and the screw on the top side.

2-4-7. ASSEMBLY OF THE MAIN CAM GEAR

NOTE:
Before installing the MAIN CAM GEAR, set the CONNECTION GEAR so that the side of the gear with no teeth is towards the MAIN CAM GEAR.

- 1) Install the MAIN CAM GEAR so that the hole marker aligns with the SUB-CAM GEAR and insert the boss of the TAKE-UP TENSION REGULATOR ARM into the slot on the bottom of the MAIN CAM GEAR.

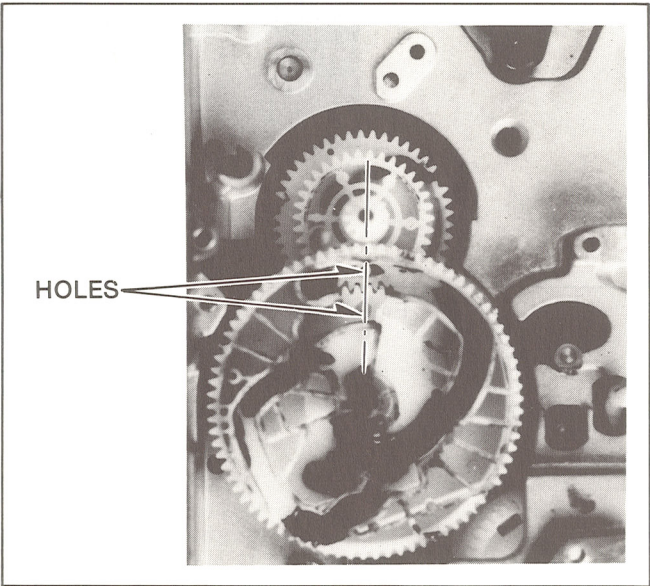


Fig. K6

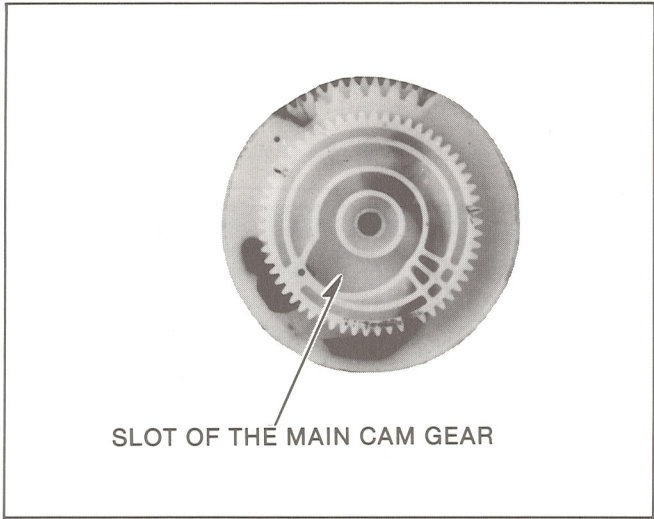


Fig. K7

2-4-8. ASSEMBLY OF THE MODE SW

- 1) Align the mark on the MODE SWITCH GEAR with the notch on the MODE SWITCH FRAME.
- 2) Install the MODE SWITCH taking care that all the phase alignments are correct. Check the CAM GEAR timing by rotating the MAIN CAM GEAR.
- 3) Install the screw(K) the retains the MODE SWITCH and ROTOR STOPPER.

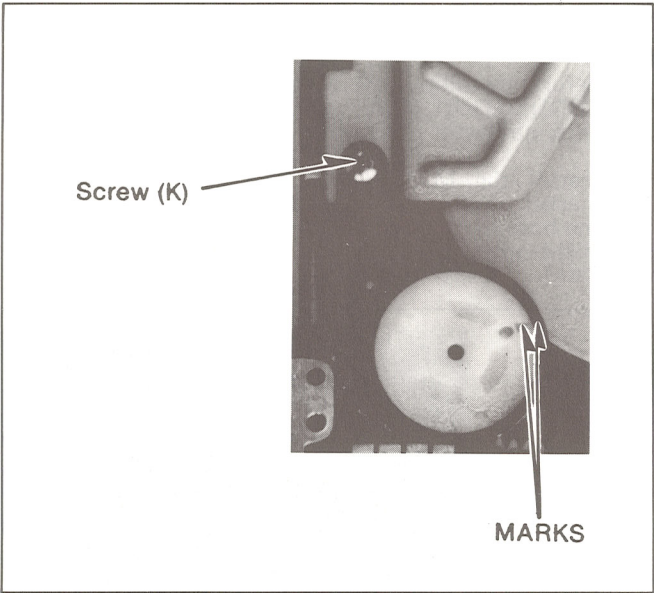


Fig. K8

2-4-9. ASSEMBLY OF THE T & S LOADING ARMS

- 1) Set the shaft holders to the unloaded position. Take care that the P5 POST does not interfere with the P3 Post or prevent it from going to the unloaded position. The TENSION ARM must be set to the position that will allow the P2 POST to move back to the unloaded position.
- 2) Install the TAKE-UP LOADING ARM and SUPPLY LOADING ARM, aligning the marks on the both GEARS.

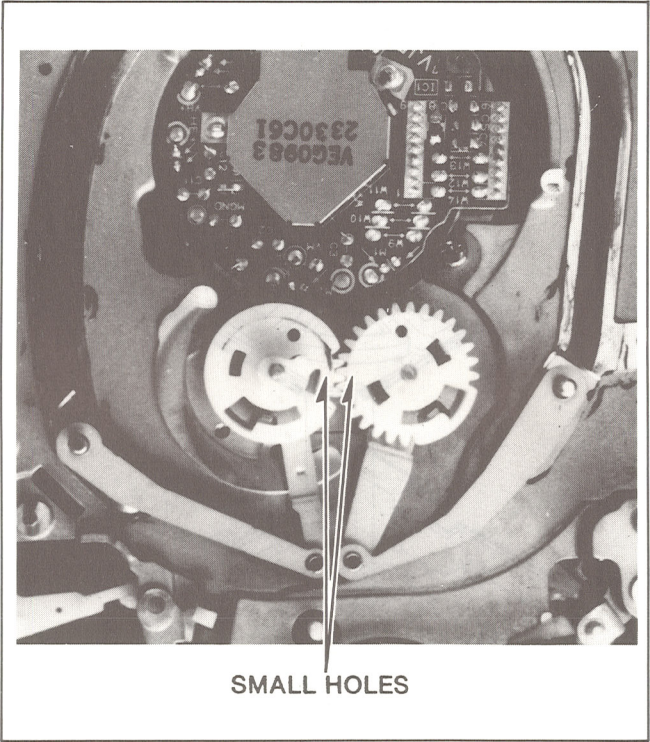


Fig. K9

2-4-10. ASSEMBLY OF THE MAIN LEVER

- 1) Install the MAIN LEVER ARM checking that the boss arms and shafts are in the correct position and the mark on the MAIN LEVER ARM is aligned with mark on the TAKE-UP LOADING GEAR.
- 2) Install the 2 cut washers.

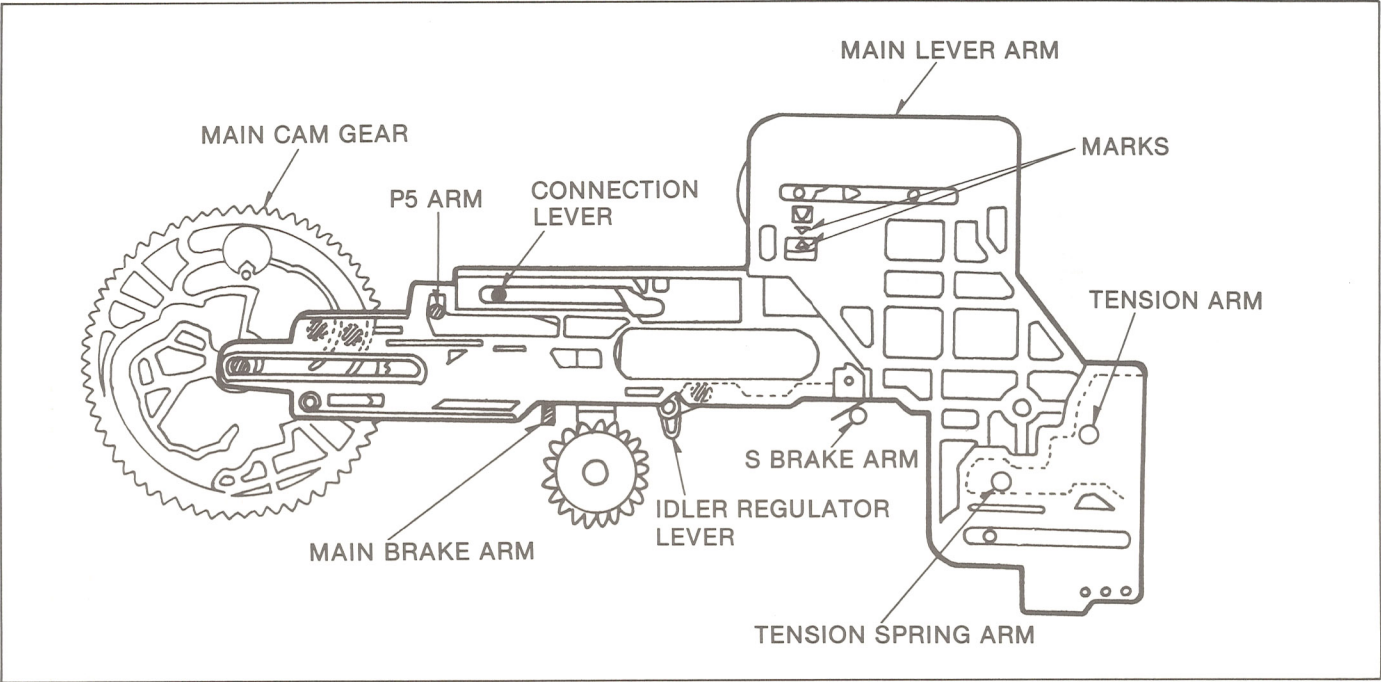


Fig. K10

2-4-11. ASSEMBLY OF THE WORM WHEEL GEAR & LOADING MOTOR BRACKET

- 1) Reinstall the WORM WHEEL GEAR.
- 2) Install the LOADING MOTOR BRACKET. First set the BRACKET over the MAIN CAM GEAR shaft and slide until it locks. Then push down on the BRACKET until the locking tab is connected to the chassis. Reinstall the screw(L).

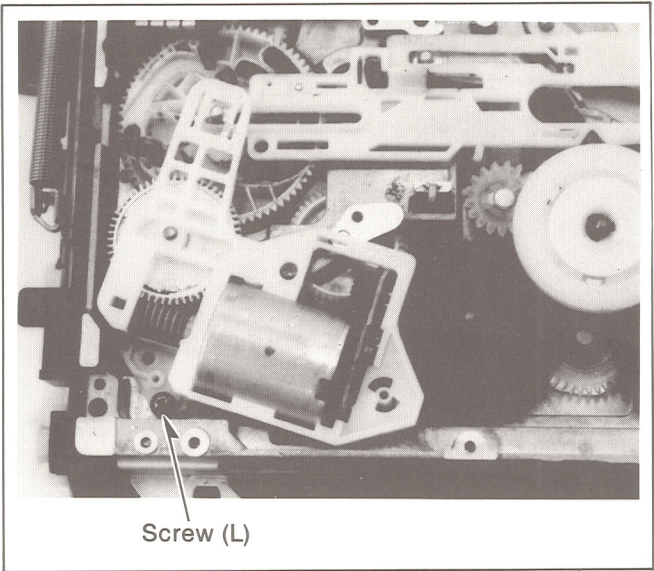


Fig. K11

2-4-12. ASSEMBLY OF THE TIMING BELT & SS BRAKE BASE

- 1) Install the TIMING BELT.
- 2) Put the TIMING BELT onto the TENSION ROLLER, slide the SS BRAKE BASE into position and install 2 screws(M).

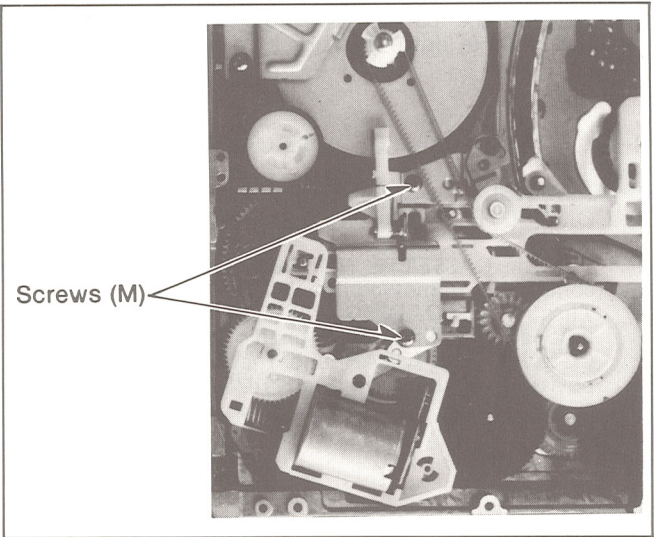


Fig. K12

2-4-13. ASSEMBLY OF THE PINCH ARM UNIT

- 1) Install the OPENER PIECE by inserting the boss into the PINCH ARM UNIT. Push down until the lock engages the shaft.

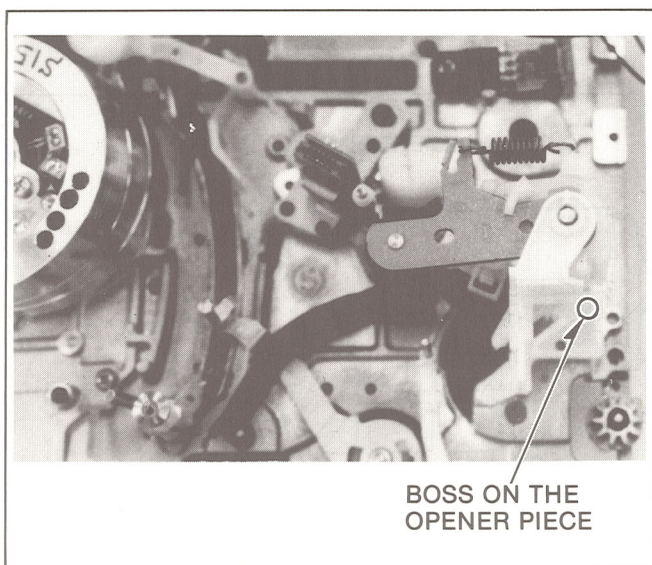


Fig. K13

2-4-14. CHECKING THE MECHANISM MOVEMENT

- 1) Check by moving the mechanism by hand then re-check using a battery to power the motor.
- 2) Rotate the LOADING MOTOR by hand in the loading direction while checking the movement of each gear. If the mechanism operates correctly when moved by hand, connect a battery to the LOADING MOTOR and re-check the movement of each gear as shown in Fig.S1/S2/S3.
- 3) Connect the battery to check the loading operation and then reverse the battery connection to check the unloading operation.
- 4) Reverse the battery to move the mechanism to the cassette down position.

2-4-15. ASSEMBLY OF THE CASSETTE HOLDER

1. ASSEMBLE A CASSETTE HOLDER AS A UNIT COMPLETE UNIT

- 1) Put the CASSETTE HOLDER into the cassette up condition by moving the WIPER ARM.
- 2) Turn the LOADING MOTOR by hand in the unloading direction until the CARRIAGE CONNECTION GEAR and the MODE SW is eject position as shown in Fig.K14/K15

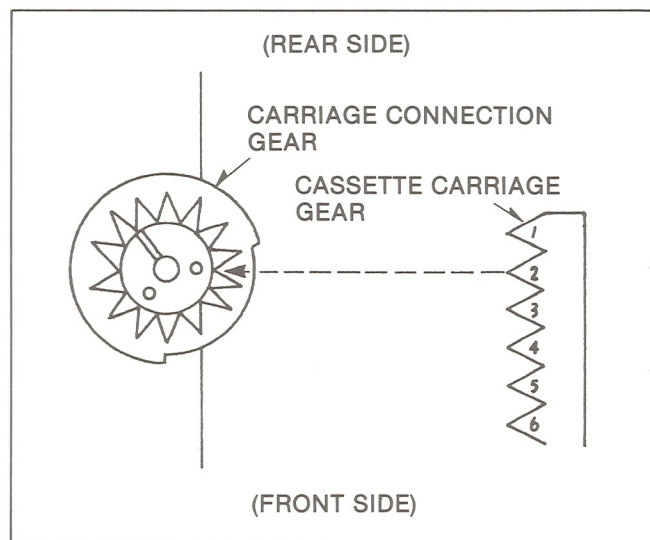


Fig. K14

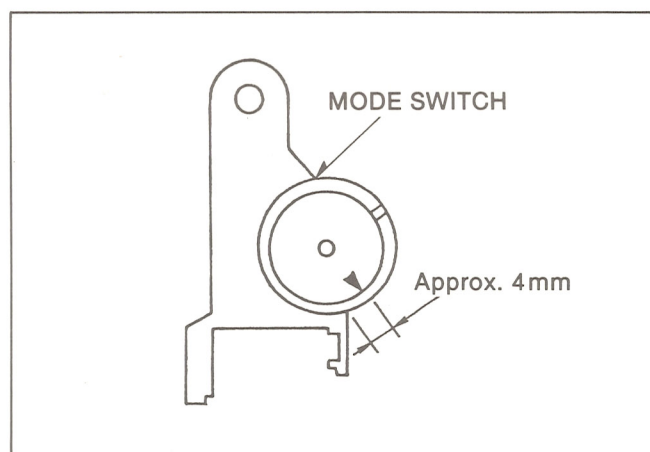


Fig. K15

- 3) Install the CASSETTE HOLDER UNIT as shown in Fig.K14.
- 4) Install 4 screws to attach the CASSETTE HOLDER UNIT.

<Eject Operation>

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

<NOTE>

If the Eject operation is performed without the cassette carriage installed while repairing or making the mechanical phase alignment, the main cam gear will not engage with the carriage connection gear will not rotate. For performing the Eject operation with the cassette carriage not installed, it is necessary to rotate to the carriage connection gear by hand in the direction of the arrow.

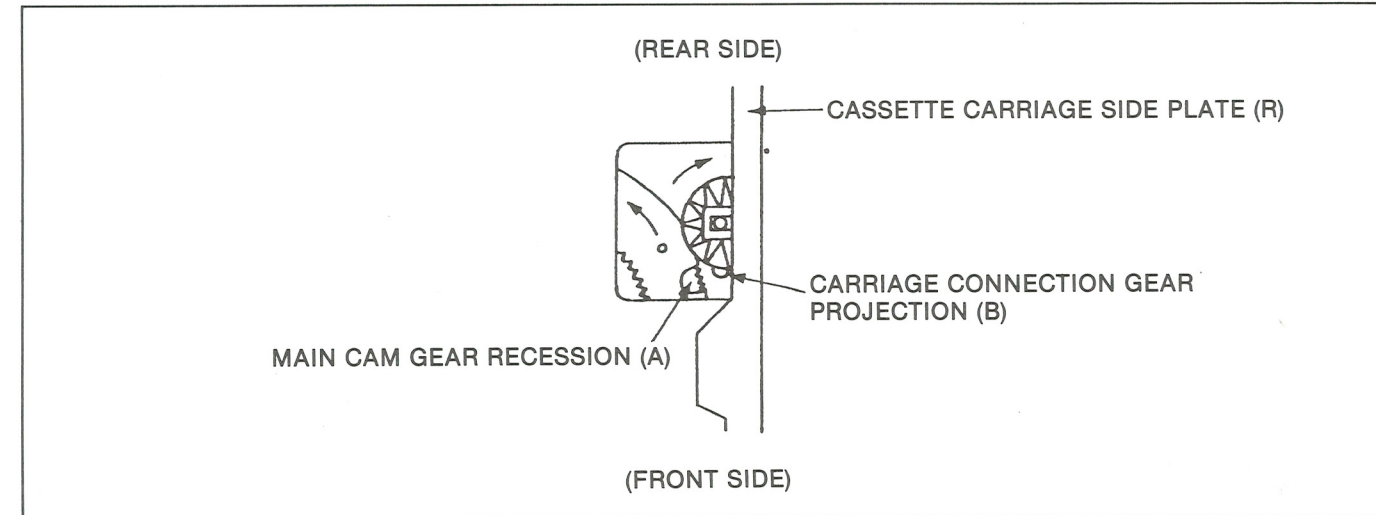


Fig. K16 Top View of Eject Operation

2. ASSEMBLE A CASSETTE HOLDER SEPARATELY

- 1) Put the CASSETTE HOLDER into the cassette down position by moving the WIPER ARM. Check the position of the WIPER ARM and RACK A. The mark of RACK A aligns with the mark on the WIPER ARM.

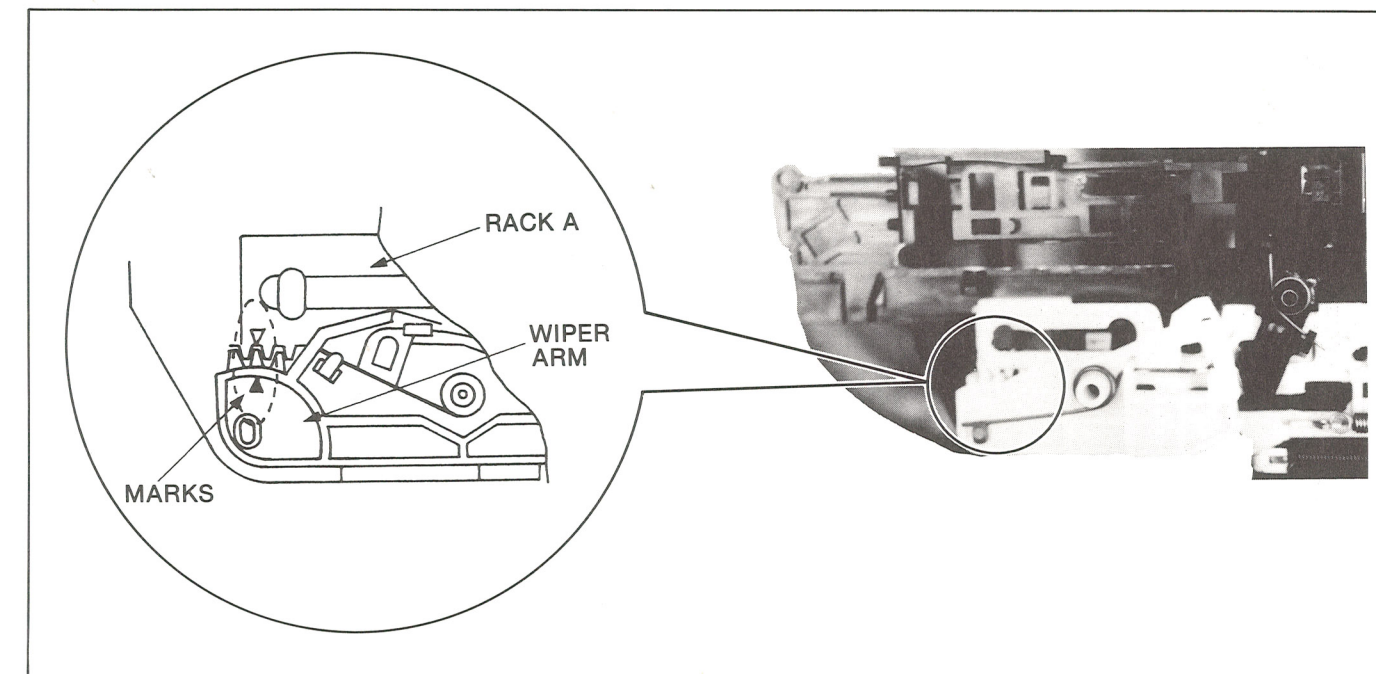


Fig. K17

- 2) Install the SIDE PLATE ASSEMBLY so that the first gear of RACK B aligns with the mark on the CARRIAGE CONNECTION GEAR.

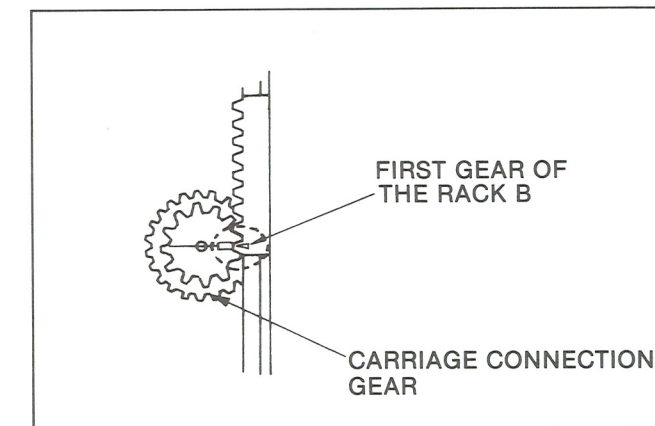


Fig. K18

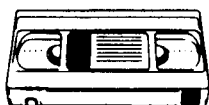
- 3) Install 4 screws to attach the SIDE PLATE ASSEMBLY.
- 4) Turn the LOADING MOTOR by hand to the cassette up position while pushing the WIPER ARM to the cassette up position.
- 5) Insert the 5 posts on the CASSETTE HOLDER into the Side Plate.
- 6) Set the TOP PLATE on the Side Plate then push it down until it locks.

2-4-16. ASSEMBLY OF THE MECHANISM CHASSIS

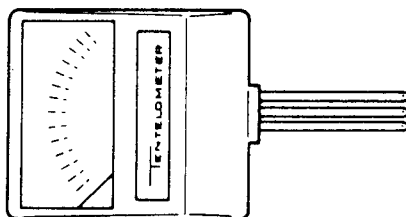
- 1) Install the MECHANISM CONNECTION C.B.A. onto the chassis. Then install the chassis into the frame and connect all the cables and connectors.
- 2) Clean the DD CYLINDER after reinstallation.
- 3) Insert a cassette and adjust the tape travel and check all the operation modes.

Servicing Fixtures & Tools

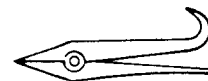
VFJ8125H3F
PAL VHS Alignment Tape
VFM8080HQFP
NTSC VHS Alignment Tape



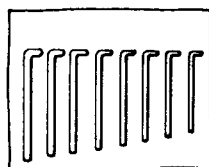
VFK0132
Back Tension Meter
(Tentelometer, Made in U.S.A.)



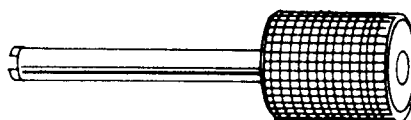
VFK0335
Retaining Ring Remover
(3mm/4mm)



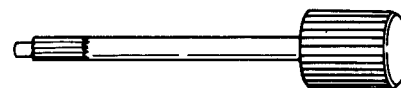
VFK0326
Hex. Wrench Set
(0.7, 0.9, 1.2, 1.5, 1.6, 2.0, 2.4, 3.0mm)



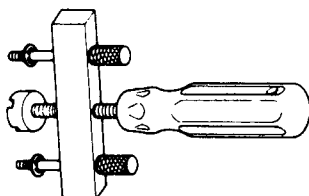
VFK0329
Post Adjustment Screw Driver



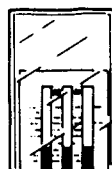
VFK0330
Fine Adjustment Gear Driver



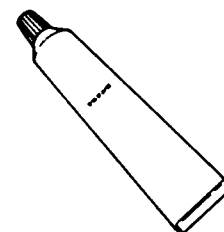
VFK0341
Upper Cylinder Remover



VFK27
Hand Cleaning Stick

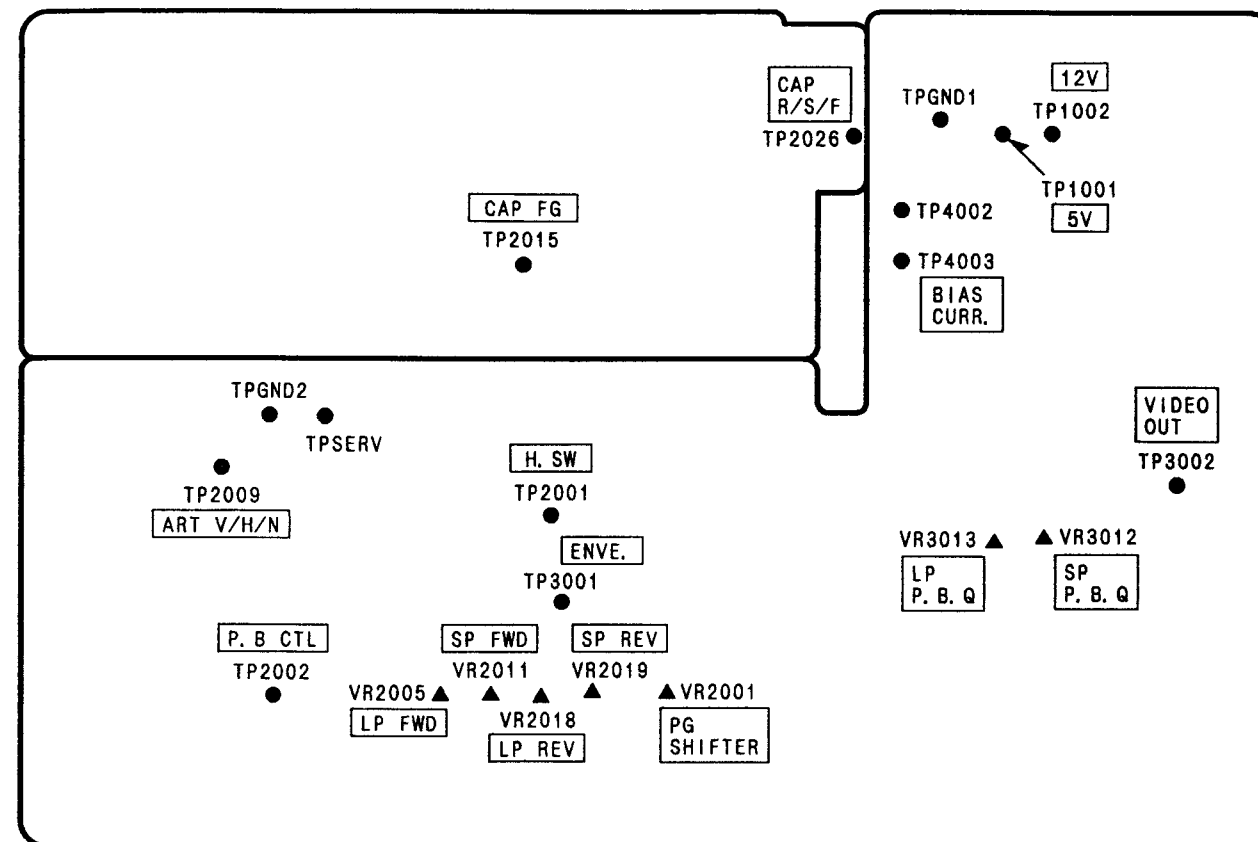


MOR265
Morlytone Grease

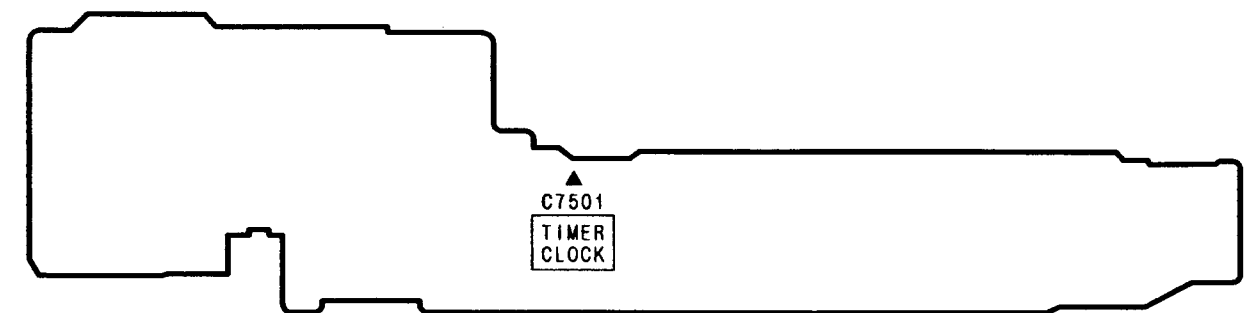


LOCATION OF TEST POINTS & CONTROLS

MAIN C.B.A.

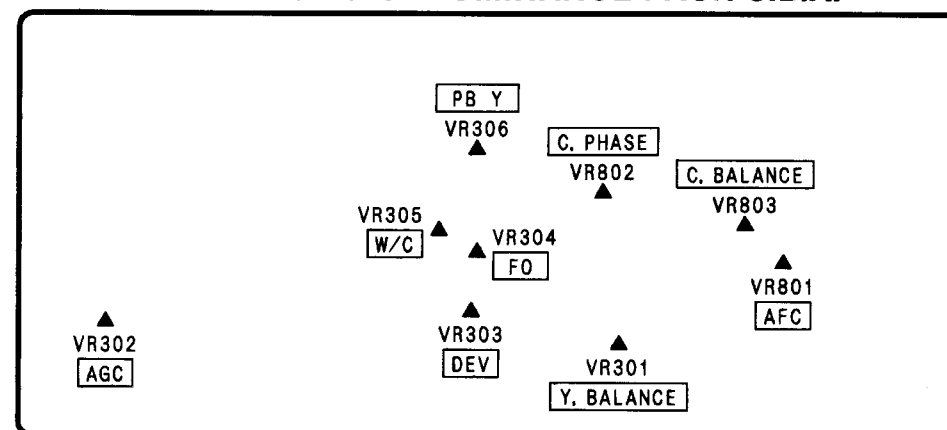


TIMER C.B.A.

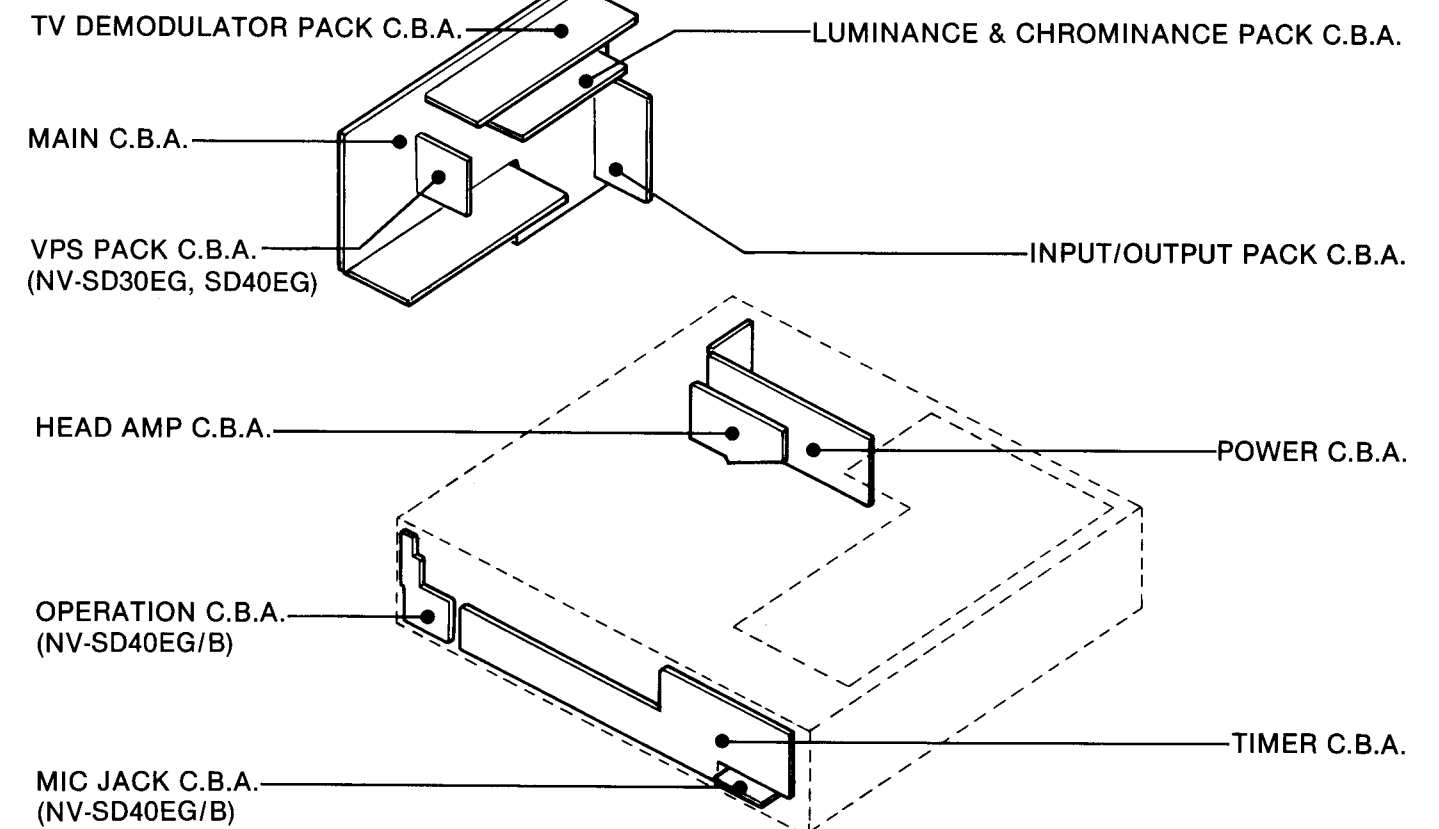
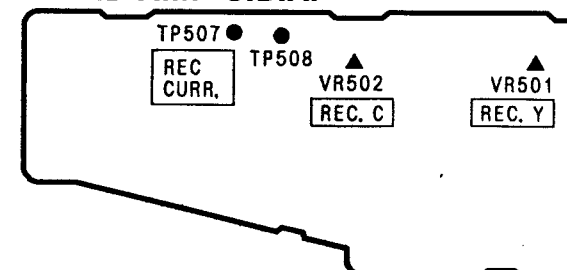


CIRCUIT BOARD LAYOUT

LUMINANCE & CHROMINANCE PACK C.B.A.



HEAD AMP C.B.A.



2-5. ELECTRICAL ADJUSTMENT PROCEDURES

2-5. ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete adjustment procedures required for electric circuits of VHS Video Cassette Recorders.

2-5-1. TEST EQUIPMENT

To perform electrical adjustments following equipment is required.

1. Dual-Trace Oscilloscope. (More than 35 MHz)
Voltage Range: 0.005-5V/div
Frequency Range: DC-35MHz
Probes: 10:1
2. Frequency Counter.
Frequency Range: 0-10MHz
Probes: 1:1
3. Universal Counter.
4. Vacuum Tube Volt Meter. (V.T.V.M.)
5. Video Sweep Generator.
6. Sine Wave Generator.
7. Video Pattern Generator.
8. VHS Alignment Tape. (VFJ8125H3F)
9. VHS Blank Tape.
10. Monitor.
11. Plastic Tip Driver.
12. DC Power Supply

2-5-2. PREPARATION

During adjustment, set each selector as follows: when no indication in the procedure.

EDIT SW.....OFF (NV-SD40B/EG)
TEST SIGNAL SW (REAR).....OFF
TAPE SPEED.....SP

2-5-3. HOW TO READ ADJUSTMENT PROCEDURES

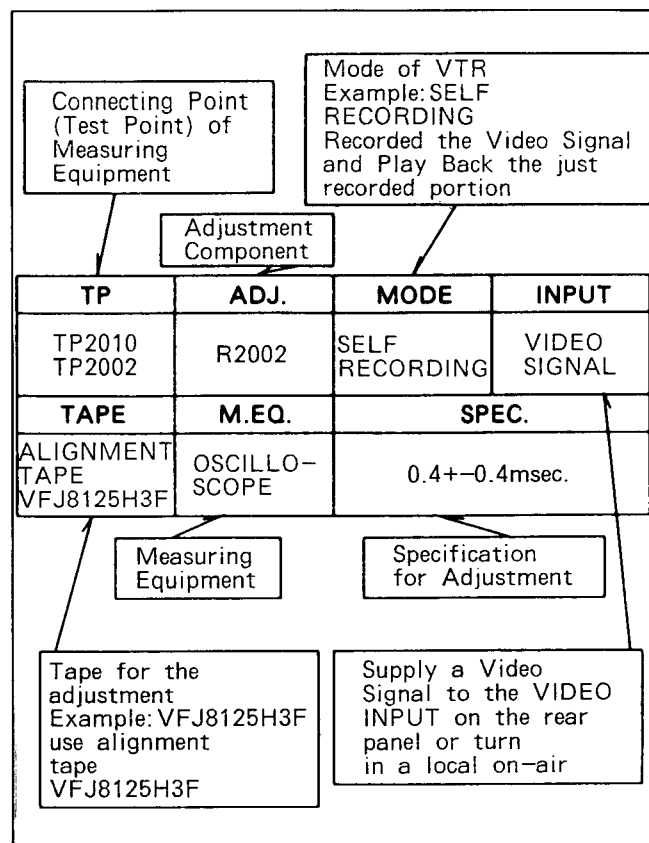


Fig. E1

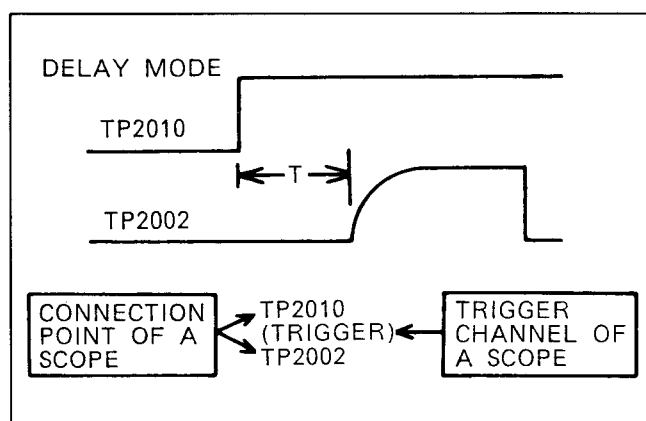


Fig. E2

SERVO SECTION

2-5-4. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAYBACK	
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO- SCOPE	$6.5 \pm 0.5(H)$ [NV-SD30B/EG] $7.0 \pm 0.5(H)$ [NV-SD40B/EG]	

1. Connect the oscilloscope to TP2001(H.SW) and TP3002(V.OUT)
2. Playback the alignment tape.
3. Adjust VR2001 so that phase difference between falling edge of Head SW pulse and V-Sync is $6.5 \pm 0.5(H)$ [NV-SD30B/EG] / $7.0 \pm 0.5(H)$ [NV-SD40B/EG]

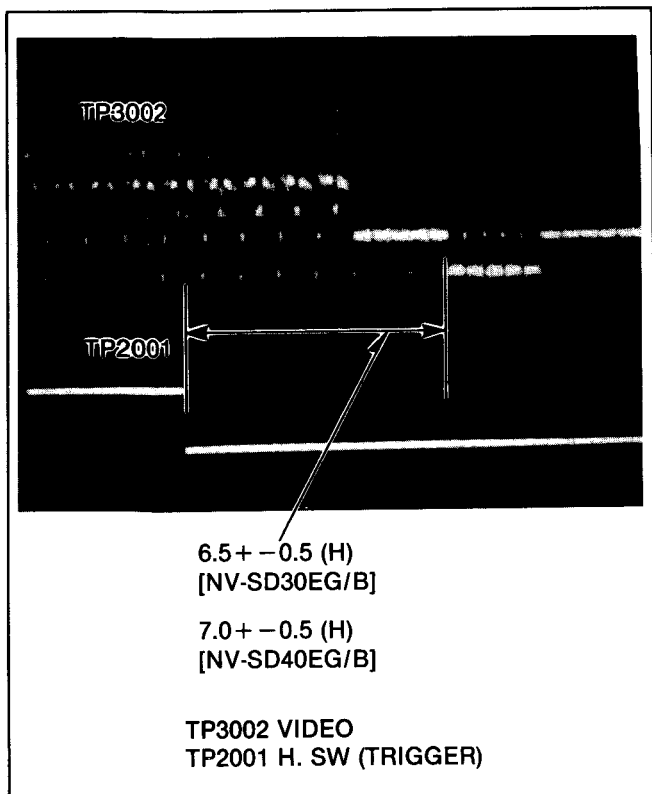


Fig. E3

2-5-5. SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2011(SP) VR2006(LP)	SP (SELF RECORDED) STILL	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	MONITOR TV	$A=B$ $(A+B)/V < 1/6$	

1. Short out the cut jumper wire as shown in Fig.E4.
2. Record the colour bar in SP(LP) mode for a few minutes and playback the just recorded portion.
3. Place the unit in SLOW mode by pressing search button on Remote Controller Unit.
4. Adjust VR2011(SP)(VR2006(LP)) until noise bar on the monitor screen is minimized.(Detail specifications are shown in Fig.E5)
5. Disconnect the short across jumper wire.

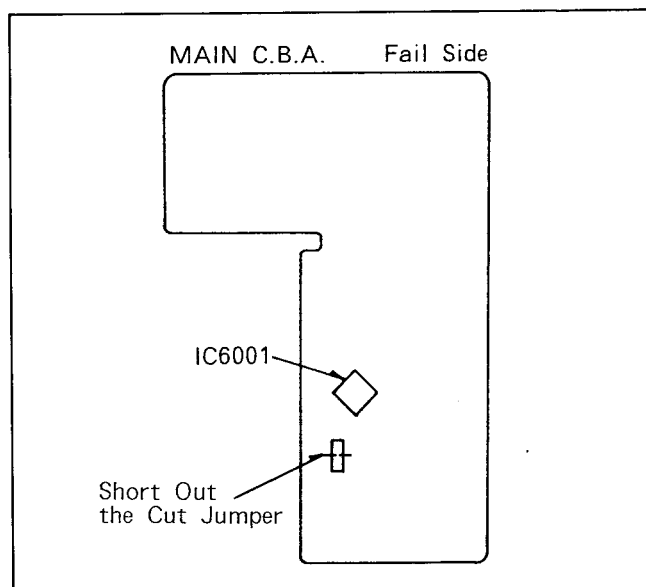


Fig. E4

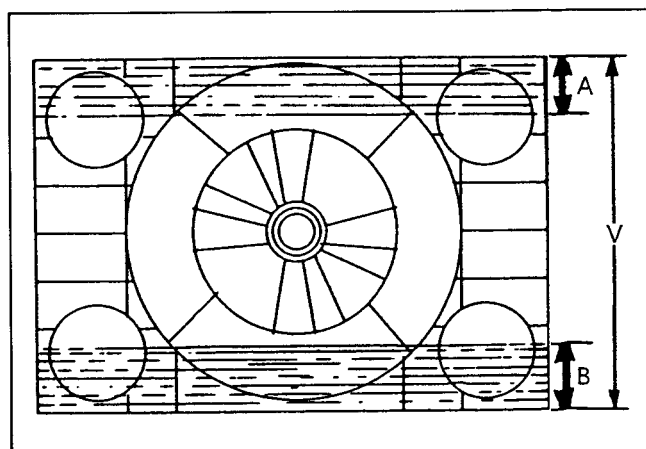


Fig. E5

2-5-6. REVERSE SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2019(SP) VR2018(LP)	REVERSE SLOW	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	MONITOR TV	SP: $A=B$ $(A+B)/V \leq 1/6$ LP: $A=0$ $B/V \leq 1/3$	

1. Short out the cut jumper wire as shown in Fig.E4.
2. Record the colour bar in SP(LP) mode for a few minutes and playback the just recorded portion.
3. Place the unit in SLOW mode by pressing search button on Remote Controller Unit.
4. Adjust VR2019(SP)(VR2018(LP)) until noise bar on the monitor screen is minimized. (Detail specifications are shown in Fig.E5)
5. Disconnect the short across jumper wire.

LUMINANCE & CHROMINANCE SECTION

2-5-7. AGC ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR302	STOP	COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLOSCOPE	$2.0 \pm 0.06 (V_{p-p})$	

1. Supply the colour bar signal to video input.
2. Connect the oscilloscope to video output (from the AV21-pin) (unterminated).
3. Adjust VR302 so that the video output signal level is $2.0 \pm 0.06 V_{p-p}$.

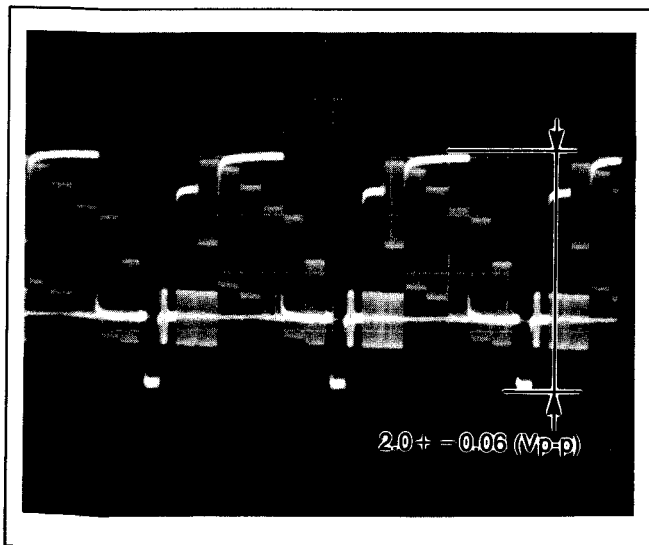


Fig. E6

2-5-8. WHITE CLIP ADJUSTMENT

TP	ADJ.	MODE	INPUT
PIN(80) OF IC302	VR305	RECORDING	COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLOSCOPE	WHITE CLIP LEVEL $190 \pm 5 / -3\%$	

1. Supply the colour bar signal to video input.
2. Connect the oscilloscope to PIN(80) of IC302.
3. Record the colour bar signal.
4. Adjust VR305 so that the white clip level is $190 \pm 5 / -3\%$.

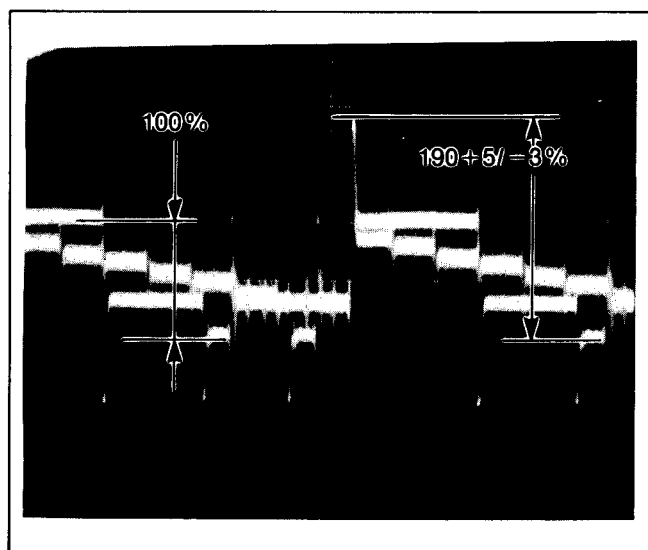


Fig. E7

2-5-9. DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR303 VR304	(SELF RECORDED) PLAYBACK	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	Y: $2.0 \pm 0.1 (V_{p-p})$	

Note:

Before this adjustment, the PLAYBACK LEVEL ADJUSTMENT(2-6-12) must be adjusted.

1. Supply the colour bar signal to video input.
2. Connect the oscilloscope to video output.
3. Record the colour bar signal and adjust VR303 and VR304 during recording.
4. Playback the just recorded portion and confirm the playback Y-signal level is $2.0 \pm 0.1 V_{p-p}$. If the signal level is out of the specification, repeat 3. and 4. until the signal level becomes the specification.

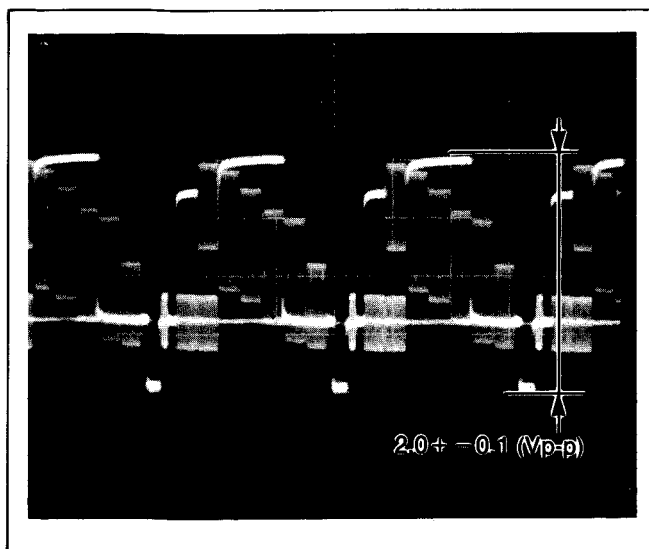


Fig. E8

2-5-10. Y-NR BALANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
PIN(71) OF IC302	VR301	STOP	COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLOSCOPE	MINIMIZED AS POSSIBLE	

1. Supply the colour bar signal to video input.
2. Connect the oscilloscope to PIN(71) of IC302.
3. Adjust VR301 so that the video signal level is minimized.

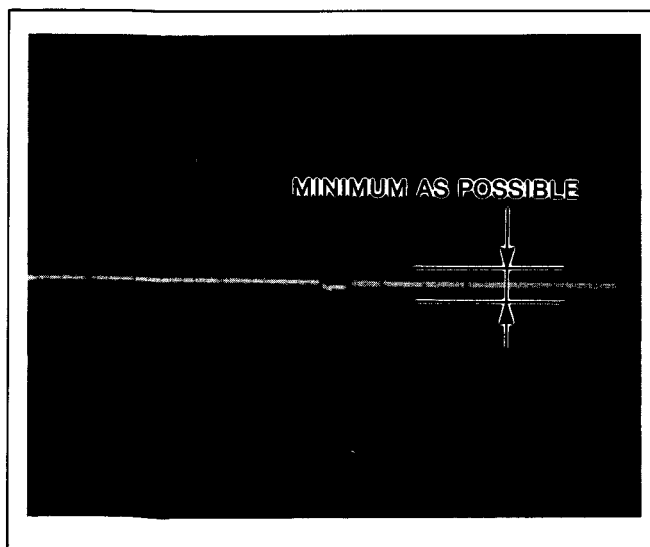


Fig. E9

2-5-11. ARTIFICIAL NTSC AFC FREE RUN ADJUSTMENT (EXCEPT NV-SD30B/EG)

TP	ADJ.	MODE	INPUT
PIN(9) OF IC801	VR301	STOP	
TAPE	M. EQ.	SPEC.	
	DC POWER SUPPLY FREQUENCY COUNTER	15735Hz±100Hz	

1. Supply +5V DC to PIN(29) of IC801.
2. Connect the frequency counter to TL801.
3. Adjust VR801 so that the frequency is 15735Hz±100Hz.

2-5-12. PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR306	PLAYBACK	
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE VFJ8125H3F	OSCILLOSCOPE	Y: 2.0±0.1Vp-p CYAN: 1.1±0.2Vp-p	

1. Connect the oscilloscope to video output.
2. Playback the alignment tape (colour bar portion).
3. Adjust VR306 so that the playback signal level is as follows.

Y-LEVEL : 2.0±0.1Vp-p
CYAN-LEVEL : 1.1±0.2Vp-p

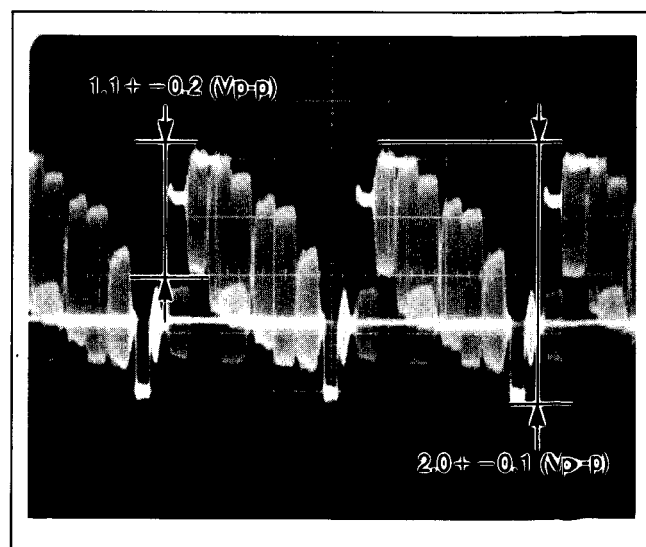


Fig. E10

2-5-13. C-NR ADJUSTMENT

TP	ADJ.	MODE	INPUT
PIN(42) OF IC302	VR802 VR803	SELF REC&PB	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	MINIMIZE AMPLITUDE	

1. Record the colour bar signal and playback the just recorded portion.
2. Connect the oscilloscope to PIN(42) of IC302.
3. Adjust VR802 and VR803 until the signal is minimum.

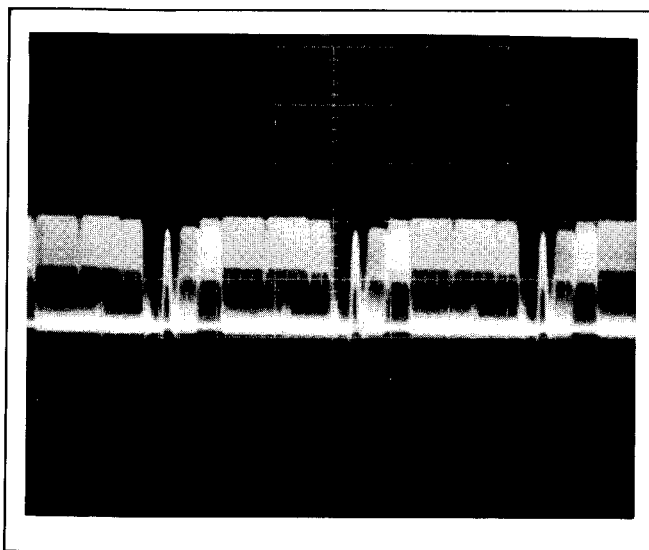


Fig. E11 Before adjustment

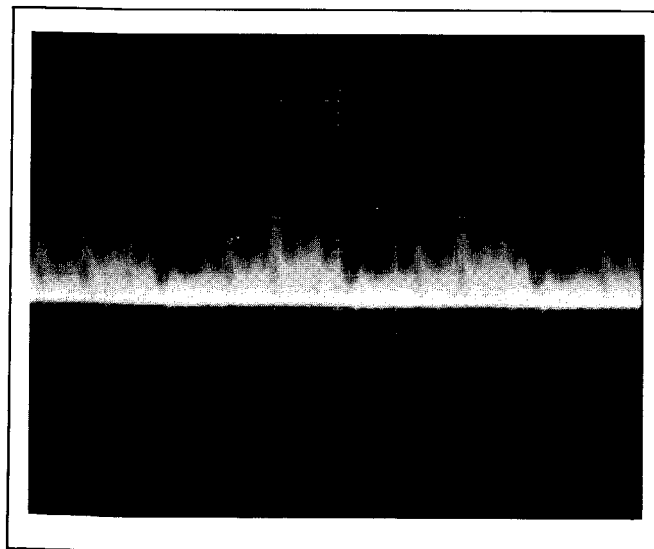


Fig. E12 After adjustment

2-5-14. RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR501(Y) VR502(C)	RECORDING	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	Y: 150 ± 5 (mVp-p) C: 37 ± 2 (mVp-p) [NV-SD30B/EG] Y: 130 ± 5 (mVp-p) C: 32 ± 2 (mVp-p) [NV-SD40B/EG]	

1. Record the colour bar signal.
2. Connect the oscilloscope to TP507(HOT) and TP508(GND).
3. Adjust VR501 so the amplitude of sync tip portion is 150 ± 5 mVp-p [NV-SD30B/EG] 130 ± 5 mVp-p [NV-SD40B/EG].
4. Supply +5V DC to PP3001-6 to reduce luminance component.
5. Adjust VR502 until the amplitude of Cyan is 2 mVp-p [NV-SD30B/EG] / 32 ± 2 mVp-p [NV-SD40B/EG].

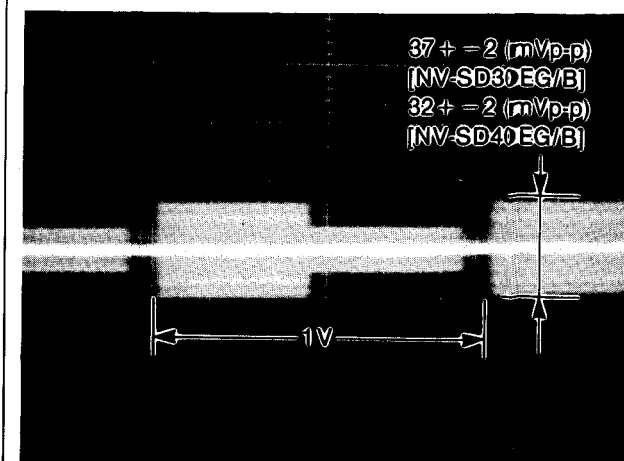
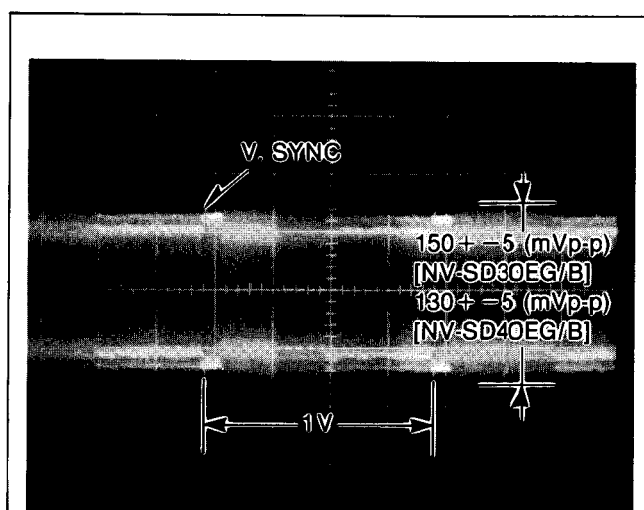


Fig. E13

2-5-15. VIDEO FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3012(SP) VR3013(LP)	(SELF RECORDED) PLAYBACK (SP/LP)	VIDEO SWEEP SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE VIDEO SWEEP GENERATOR	SP: 0+-1(dB) (90 - 110%) LP: 0+-1(dB) (90 - 110%)	

Note:

- (1) Set the Video Sweep Signal as shown in Fig.E14.

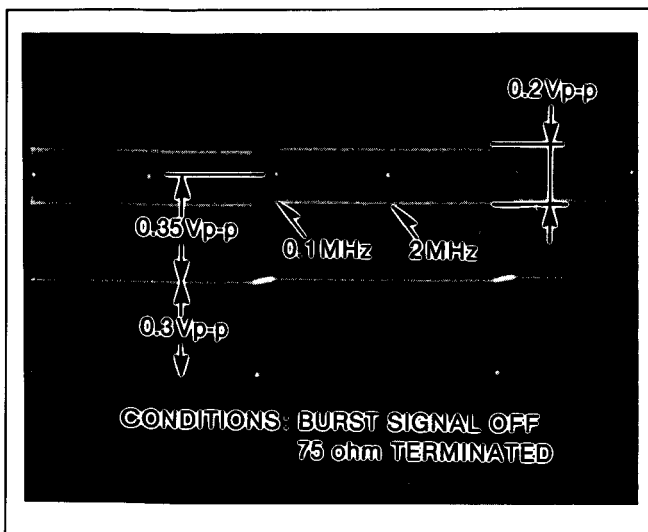


Fig. E14

1. Record the Video Sweep Signal in SP/(LP) mode for a few minutes and playback the just recorded signal.
2. Connect the oscilloscope to TP3002.
3. Adjust VR3012(SP)(VR3013(LP)) until the frequency response level is 0+-1dB at 2MHz portion by comparing with 0.1MHz portion.

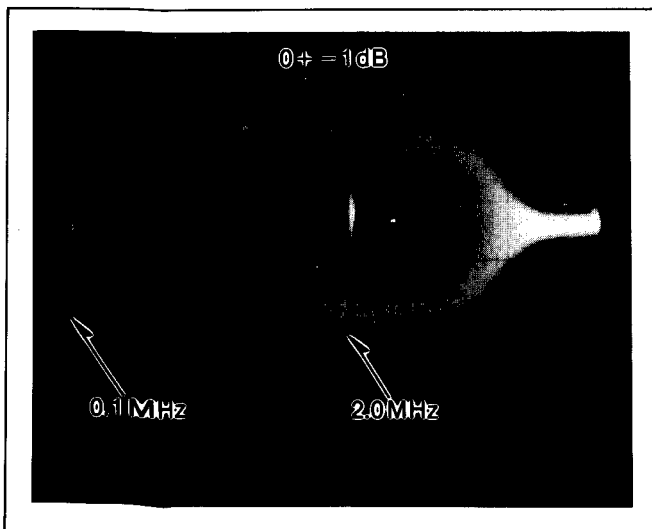


Fig. E15

AUDIO SECTION

2-5-16. BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4002	RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	V.T.V.M.	2.8+-0.1(mVrms) [NV-SD30B/EG] 2.9+-0.1(mVrms) [NV-SD40B/EG]	

Note:

Connect the Audio input and GND.

1. Place the unit in SP recording mode.
2. Connect the V.T.V.M. to TP4002(HOT) and TP4003(GND).
3. Adjust VR4002 so reading of V.T.V.M. is $2.8 \pm 0.1 \text{ mVrms [NV-SD30B/EG] / } 2.9 \pm 0.1 \text{ (mVrms) [NV-SD40B/EG]}$.

TIMER SECTION

2-5-17. TIMER REFERENCE CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7501-28	C7501	STOP	
TAPE	M. EQ.	SPEC.	
	UNIVERSAL COUNTER	7812.5+-0.015(us)	

1. Connect the universal counter to TP7501-28.
2. Adjust C7501 so the reading of universal counter is $7812.5 \pm 0.015 \text{ us}$.

SECTION 3

ABBREVIATIONS & BLOCK DIAGRAMS

3-1. ABBREVIATIONS

443NT [L]	4.43 NTSC ①	BIL. [H]	BILINGUAL ⑥
A. COMP	AUDIO COMPONENT SIGNAL	BIL/M1 [L]	BILINGUAL ①
A. COMPO	AUDIO COMPONENT SIGNAL	BS CLOCK	BS CLOCK
A. D.P [L]	AUDIO DUBBING PAUSE ①	BS DATA	BS DATA
A. D/L [L]	AUDIO DUBBING PAUSE ①	BS LCH IN	BS L CHANNEL INPUT
A. DEF [S]	AUDIO DEFEAT	BS MIX [H]	BS MIX ⑥
A. DEF [S] [L]	AUDIO DEFEAT	BS MON [H]	BS MONITOR ⑥
A. DUB P [L]	AUDIO DUBBING PAUSE ①	BS MONI [H]	BS MONITOR ⑥
A. DUB [H]	AUDIO DUBBING ⑥	BS RCH IN	BS R CHANNEL INPUT
A. ERASE	AUDIO ERASE	BS VIDEO	BS VIDEO SIGNAL
A. H. SW	AUDIO HEAD SWITCHING PULSE	BS VIDEO/BS1	BS VIDEO SIGNAL
A. HEAD [R]	AUDIO HEAD (REC)	BS [H]	BS ⑥
A. HEAD [W]	AUDIO HEAD (PLAY)	BS. LEVEL	BS LEVEL
A. IN [L]	AUDIO INPUT (L)	BS. M [H]	BS MONITOR ⑥
A. IN [R]	AUDIO INPUT (R)	BS/VTR [H]	BS/VTR ⑥
A. MUT [H]	AUDIO MUTE ⑥	BUS CLK	BUS CLOCK
A. MUTE [H]	AUDIO MUTE ⑥	BUS LSN	BUS LISTEN
A. OUT [L]	AUDIO OUTPUT (L)	BUS TLK	BUS TALK
A. OUT [R]	AUDIO OUTPUT (R)	BUZZER	BUZZER
A. RF OUT	AUDIO RF SIGNAL OUTPUT	CAP EC	CAPSTAN TORQUE CONTROL
A/VS/S. DATA	AV SW/SERIAL DATA	CAP M GND	CAPSTAN MOTOR GND
AC ONLINE	AC ONLINE	CAP. ET	CAPSTAN TORQUE CONTROL
AC. O/EE. H	AC ONLINE/EE ⑥	CAP. FG1	CAPSTAN FG1 PULSE
AFC S C	AFC S CURVE	CAP. FG2	CAPSTAN FG2 PULSE
AFC [S]	AFC S CURVE	CAS. SW	CASSETTE SW
AFC. DEF	AFC DEFEAT	CCN	PLAYBACK CONTROL SIGNAL (-)
ARFC OUT	AUDIO RF SIGNAL OUTPUT	CCP	PLAYBACK CONTROL SIGNAL (+)
ART. V	ARTIFICIAL VERTICAL SYNC SIGNAL	CHM	CONTROL SIGNAL (+)
ART. V. MM	ARTIFICIAL VERTICAL SYNC SIGNAL MONO MULTI	CHP	CONTROL SIGNAL (-)
ART. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL ⑥/NORMAL	CINEM [L]	CINEMA ①
AT. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL ⑥/NORMAL	CINEMA [L]	CINEMA ①
ATSW/TEST/NOR/SE	ARTIFICIAL VERTICAL SYNC SIGNAL ⑥/NORMAL	CINEMA/MIX	CINEMA/MIX
AUDIO IN [L]	ARTIFICIAL VERTICAL SYNC SIGNAL ⑥/NORMAL	CKL	RATCH LOCK
AUDIO IN [R]	TEST/NORMAL/SERVICE	CKS	SHIFT LOCK
AUDIO OUT [L]	AUDIO INPUT (L)	CL	CLOCK
AUDIO OUT [R]	AUDIO INPUT (R)	CLK	CLOCK
AUDIO SELECT [H]	AUDIO OUTPUT (L)	CLK (C.G)	CLOCK
AUDIO. L	AUDIO OUTPUT (R)	CLOCK. IN	CLOCK INPUT
AUDIO. R	AUDIO SELECT ⑥	CLP	CLAMP
AV CNT	AUDIO (L)	COL/B/W/NOR	COLOUR/BLACK & WHITE/NORMAL
AV CTL	AUDIO (R)	COLOR [H]	COLOUR ⑥
AV CTL/S. CLK	AV CONTROL	CONV	CONVERTOR
AV. C.M.	AV CONTROL	CS	CHIP SELECT
AVCNT/METER. R	AV CONTROL/SERIAL CLOCK	CTL GND	CONTROL GND
AVSW/METER. L	AV CONTROL MODE	CTL HEAD [+]	CONTROL HEAD (+)
B MODE. H	AV CONTROL/LEVEL METER (R)	CTL HEAD [-]	CONTROL HEAD (-)
B.G.P	AV SW/LEVEL METER (L)	CTL [+]	CONTROL HEAD (+)
BACKUP 5V	B MODE ⑥	CTL [-]	CONTROL HEAD (-)
BAND. U.E.	BURST GATE PULSE	CUE BIAS	CUE BIAS
BANDVL. D	BACK UP 5V	CURRENT LIM	CURRENT LIMMETER
BI/MI [L]	BAND U	CYL ET	CYLINDER TORQUE CONTROL
BIL	BAND VL	CYL GND	CYLINDER GND
BIL [L]	BILINGUAL/MIX ①	D.F.M. REC [H]	DELAIED FM RECORDING ⑥
	BILINGUAL	D. FM REC [L]	DELAIED FM RECORDING ①
	BILINGUAL ①	D. GND	DIGITAL GND

ABBREVIATIONS

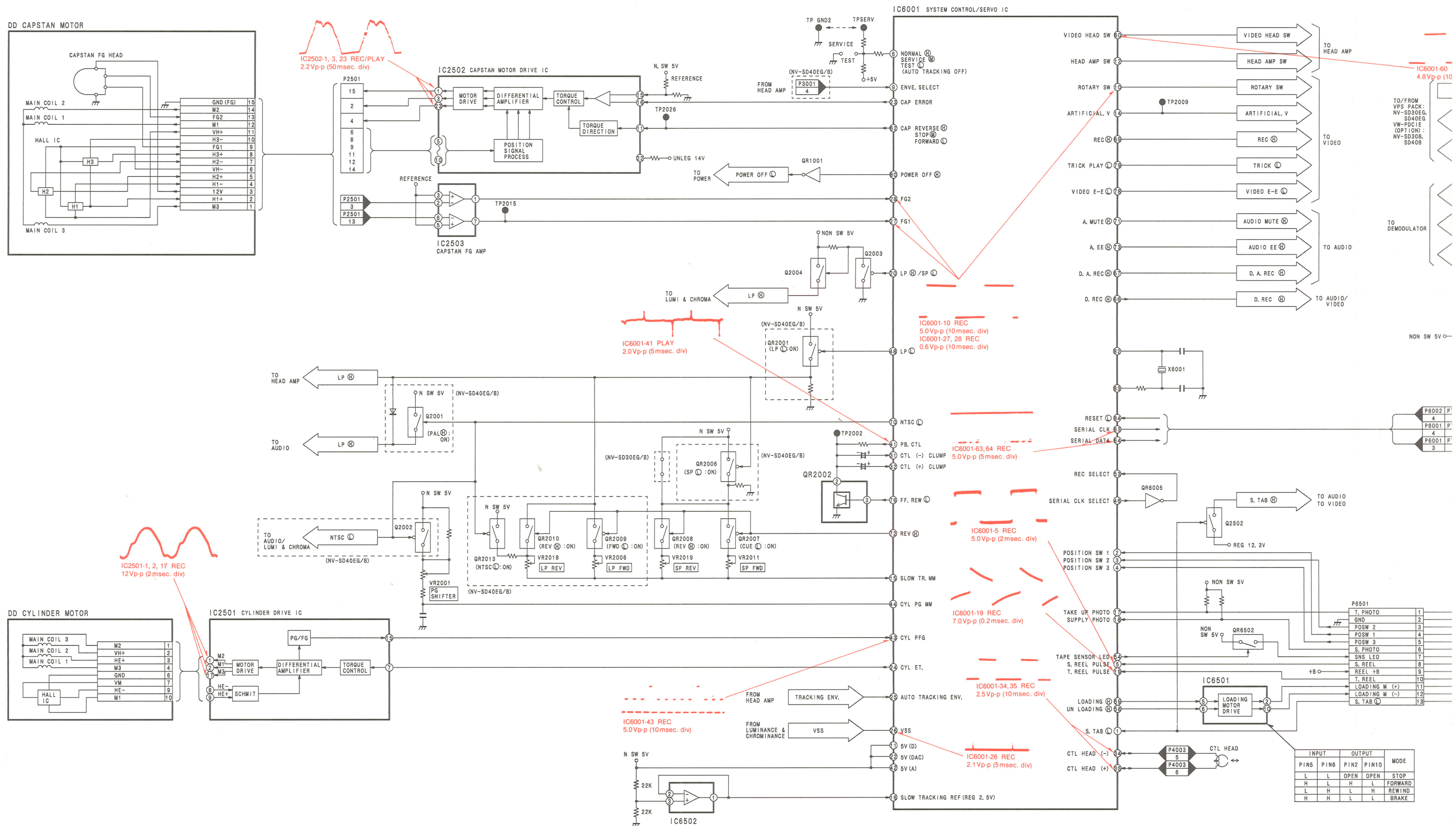
D. REC [H]	DELAYED RECORDING ⑥	H. SYNC	HORIZONTAL SYNC
D4/S. LED	D4/STILL LED	H. AMP. SW	HEAD AMP SW PULSE
D4/STILLED	D4/STILL LED	H. P <R>	HEAD PHONE (R)
DAC [CLK]	TUNER DAC (CLOCK)	H. P <L>	HEAD PHONE (L)
DAC/FSCS	TUNER DAC/FS CHIP SELECT	H. P GND	HEAD PHONE GND
DAREC [H]	DELAYED AUDIO RECORDING ⑥	H. P OUT [L]	HEAD PHONE OUTPUT (L)
DATA	DATA	H. P OUT [R]	HEAD PHONE OUTPUT (R)
DECODER [L]	DECODER (L)	H. SW	HEAD SW PULSE
DECODER [R]	DECODER (R)	HEAD PHONE [L]	HEAD PHONE (L)
DEW	DEW	HEAD PHONE [R]	HEAD PHONE (R)
DEW SNS	DEW SENSOR	HEAD SW	HEAD SW
DFMRE [H]	DELAYED FM AUDIO RECORDING ⑥	HEATER [+]	HEATER (+)
E. REC 5V	EXCEPT RECORDING 5V	HEATER [-]	HEATER (-)
EC	ERROR TORQUE CONTROL	HSS	HORIZONTAL SYNC SIGNAL
ECR	ERROR TORQUE CONTROL	HTR [+]	HEATER (+)
	REFERENCE VOLTAGE	HTR [-]	HEATER (-)
EDT TRIG [L]	EDIT TRIGGER ①	I RFE	REFERENCE CURRENT
EDIT [H]	EDIT ⑥	ICL	CONTROL AGC CIRCUIT
EE [H]	EE ⑥	IF	INTERMEDIATE FREQUENCY
EE [H]/INS [M]	EE ⑥/INSERT ⑥	IN SELA1	INPUT SELECT A1 POSITION
EE. VV. TR	EE/VV/TRICK PLAY	IN SELA2	INPUT SELECT A2 POSITION
EJECT. PO	EJECT POSITION	IN SELA3	INPUT SELECT A3 POSITION
EJECT/VDET	EJECT/REVERSE SLOW LOCK	INS L/R [L]	INSERT Lch/Rch ①
ENV. SEL	ENVELOPE SELECT	INS. [H]	INSERT ⑥
ENVE. OUT	ENVELOPE OUTPUT	INSEL A1	INPUT SELECT A1 POSITION
ENVE. SEL	ENVELOPE SELECT	INSEL A2	INPUT SELECT A2 POSITION
ENV SELECT	ENVELOPE SELECT	INSERT	INSERT
EP [H]	LP ⑥	INSERT [H]	INSERT ⑥
EP/LP [H]	LP ⑥	IO CS	INPUT/OUTPUT CHIP SELECT
EP/LP/SP	LP/SP	JOG1	JOG1
EP/SS [H]	LP/SLOW/STILL/STOP ⑥	JOG S3 LED/FOWRD	JOG LED/FORWARD LED
EPROMCS	EPROM CHIP SELECT	JOG/F. LED	JOG LED/FORWARD LED
EX. REC 5V	EXCEPT RECORDING 5V	JSB [H]	JSB ⑥
FF/REW [L]	FIRST FORWARD/REWIND ①	JST. CLCK	JUST CLOCK
FG1 IN	FG1 PULSE INPUT	JST. CLK	JUST CLOCK
FG2 IN	FG2 PULSE INPUT	JST. CLOCK	JUST CLOCK
FILTER ADJUSTMEN	FILTER ADJUSTMENT	L. OUT	Lch OUTPUT
FLY ERASE [H]	FLYING ERASE HEAD ON ⑥	L. CH [H]	Lch ⑥
FLY ON [H]	FLYING ERASE E HEAD ON ⑥	L. CH [L]	Lch ①
FLY. E [H]	FLYING ERASE HEAD ON ⑥	LED (MAIN)	LED (MAIN)
FM MUT [H]	FM AUDIO MUTE ⑥	LED (STEREO)	LED (STEREO)
FM MUTE [H]	FM AUDIO MUTE ⑥	LED (SUB)	LED (SUB)
FM OUT [L]	FM OUTPUT (L)	LED CKL	LED SERIAL CLOCK
FM OUT [R]	FM OUTPUT (R)	LED CKS	LED SERIAL CLOCK
FM PACK OUT [L]	FM PACK OUTPUT (L)	LED DATA	LED SERIAL DATA
FM PACK OUT [R]	FM PACK OUTPUT (R)	LINE IN 1 [L]	LINE INPUT 1 (L)
FM/BS SEL [L]	FM/BS SELECT (L)	LINE IN 1 [R]	LINE INPUT 1 (R)
FM/BS SEL [R]	FM/BS SELECT (R)	LINE IN 2 [L]	LINE INPUT 2 (L)
FS. CLK	FS CLOCK	LINE IN 2 [R]	LINE INPUT 2 (R)
FUL. E [H]	FULL ERASE HEAD ON ⑥	LINE IN V	LINE INPUT VIDEO
FULL. E [H]	FULL ERASE HEAD ON ⑥	LINE IN [L]	LINE INPUT (L)
FULL. E. 12V	FULL ERASE 12V	LINE IN [R]	LINE INPUT (R)
GND [A]	GND (ANALOGUE)	LINE OUT [L]	LINE OUTPUT (L)
GND [TU]	GND (TUNER)	LINE OUT [R]	LINE OUTPUT (R)
GND/N. SW. 12V	GND/NON SW 12V	LP [H]	LP ⑥

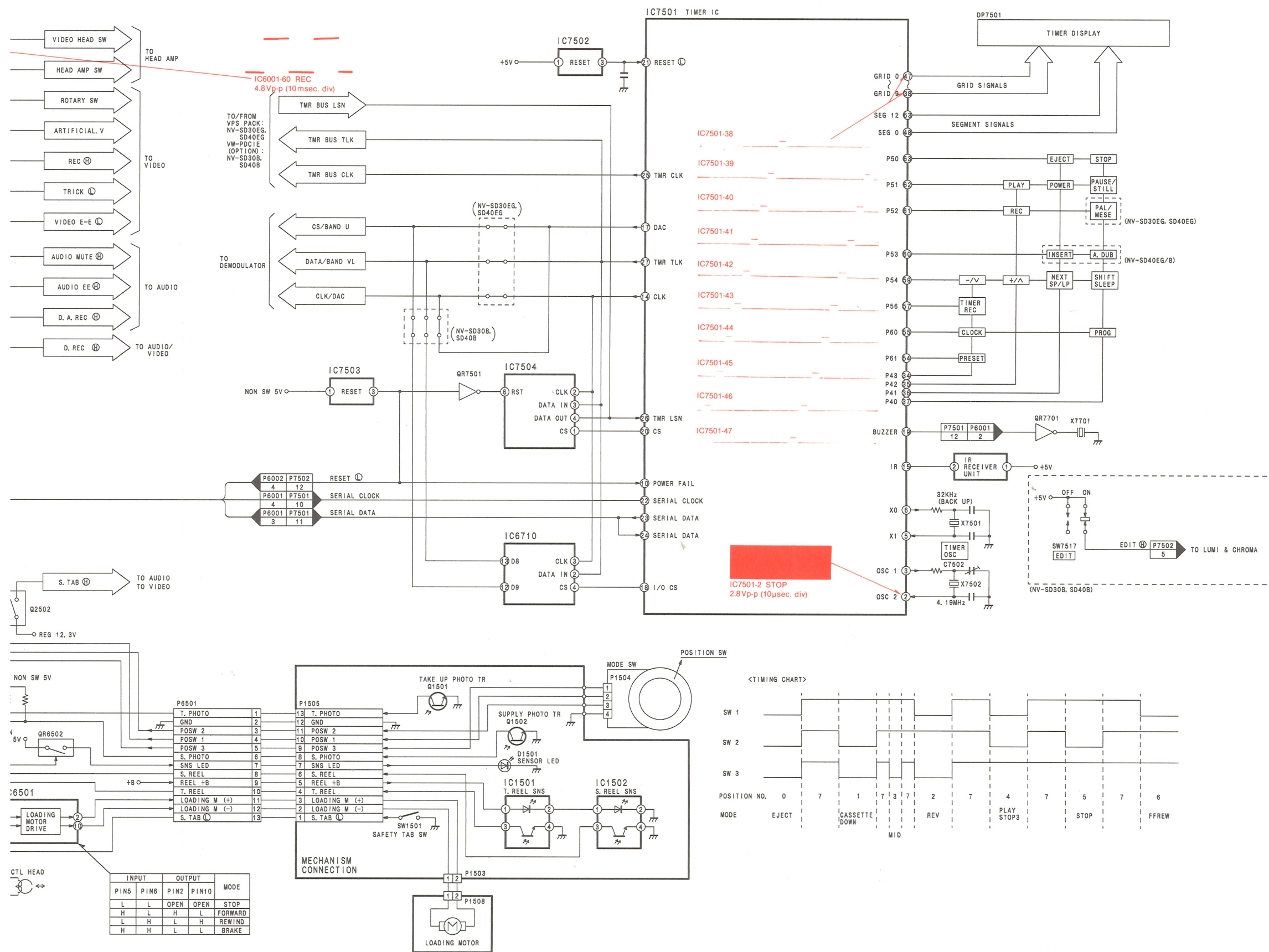
LPTRI [L]	LP TRICK PLAY ①	P. OFF [L]	POWER OFF ①
Lch/A. DUB	Lch/AUDIO DUBBING	PAL [H]	PAL ②
M GND	MOTOR GND	PAL [L]/NTSC [H]	PAL ①/NTSC ②
M REG	MOTOR REGULATOR	PB ADJ OUT	PLAYBACK ADJUST OUTPUT
MAIN OUT	MAIN OUTPUT	PB OUT	PLAYBACK OUTPUT
MAIN [L]	MAIN ①	PB. H	PLAYBACK ②
MAIN/MONO	MAIN/MONAUURAL	PFG	PG/FG
MAX IN	MAXIMAM INPUT	PHOTSN +B	PHOTO SENSOR +B
MES [H]	MESECAM ②	PICT. CNT	PICTURE CONTROL
MESE [H]	MESECAM ②	PLAY LED/RVS LED	PLAY LED/REVERSE LED
MESE [L]	MESECAM ①	PLAY. PO	PLAY POSITION
METER 5V	LEVEL METER 5V	PLAY/R. LED	PLAY LED/REVERSE LED
METER [L]	LEVEL METER (L)	PLY/DEW	PLAY/DEW ②
METER [R]	LEVEL METER (R)	POWER OFF [L]	POWER OFF ①
METER. L/AVS	LEVEL METER (L)	PREROLL [H]	PREROLL ②
METER. R/AVC	LEVEL METER (R)	PWRFAIL	POWER FAILURE DETECT
MI/BI [L]	MIX ②/BILIGUAL	R. CH [H]	Rch ②
MIC GND	MIC GND	R. CH [L]	Rch ①
MIC IN	MIC INPUT	R. ST	RESET
MIC IN [L]	MIC INPUT (L)	R/S/F	REVERSE ②/STOP ③/FORWARD ①
MIC IN [R]	MIC INPUT (R)	RCH [H]	Rch ②
MIC [H]	MIC ②	REC 12V	RECORDING 12V
MIX [H]	MIX ②	REC CHROMA	RECORDING CHROMINANCE SIGNAL
MIX [H]/CINEMA [L]	MIX ②/CINEMA SOUND ①	REC H	RECORDING ②
MIX/CINE	MIX ②/CINEMA SOUND ①	REC IN	RECORDING INPUT
MIX/CINEMA [L]	MIX ②/CINEMA SOUND ①	REC OUT [L]	RECORDING OUTPUT ①
MN. H/M. L	MONAURAL ②/MAIN ①	REC START	RECORDING START
MN. H/MAI. L	MONAURAL ②/MAIN ①	REC VR [C]	RECORDING VOLUME (COMMON)
MN2/MES. L	MONAURAL 2/MESECAM ①	REC VR [L]	RECORDING VOLUME (L)
MODE SEL	AUDIO MODE SELECT	REC VR [R]	RECORDING VOLUME (R)
MODE SW	AUDIO MODE SW	REC Y	RECORDING LUMINANCESIGNAL
MODE. S. IN	AUDIO MODE SELECT INPUT	REC [H]	RECORDING ②
MODE. S. OUT	AUDIO MODE SELECT OUTPUT	REC. C	RECORDING CHROMINANCESIGNAL
MONO [H]	MONAURAL ②	REC. Y	RECORDING LUMINANCESIGNAL
MONO [H]/MAIN [L]	MONAURAL ②/MAIN ①	REC/EE CTL	RECORDING/EE CONTROL
MONO2 [L]	MONAURAL 2	REEL-T	REEL PULSE (TAKE-UP)
MONO2/MESE [FM(L)]	MONAURAL 2/MESECAM (FM ①)	REEL-S	REEL PULSE (SUPPLY)
MOTOR GND	MOTOR GND	REGULATOR FILTER	REGULATOR FILTER
MUTE	MUTE	RESET	RESET
N. A. REC [L]	NORMAL AUDIO RECORDING	REV M F/R	REVIEW MOTOR
N. SW 12V	NON SW 12V	REV M V1	FORWARD/REVERSE
N. SW. 5. DET	NON SW 5V DETECT	REV M V2	REVIEW MOTOR V1
NICAM	NICAM	REV MOTOR F/R	REVIEW MOTOR V2
NICAM [L]	NICAM ①		REVIEW MOTOR
NOL [H]	PAL ②/4.43 NTSC ③/3.58 NTSC ①		FORWARD/REVERSE
NOR/SOFT [H]	NORMAL/SOFT TAPE PLAY ②	REV MOTOR V1	REVIEW MOROR V1
NORMAL [H]	NORMAL ②	REV MOTOR V2	REVIEW MOTOR V2
NR BIAS	NR BIAS	REV MOTOR [+]	REVIEW MOTOR (+)
NTSC [L]	NTSC ①	REV MOTOR [-]	REVIEW MOTOR (-)
OCH	CONTROL AGC CIRCUIT	REV. M. GND	REVIEW MOTOR GND
OUT	OUTPUT	RF. CHROMA	RF CHROMINANCE SIGNA L
P-OFF [H]	POWER OFF ②	RF OUT	RF OUTPUT
P-OFF [L]	POWER OFF ①	RF Y	RF LUMINANCE SIGNAL
P. FAIL	POWER FAILURE DETECT	RF. Y. IN	RF LUMINANCE SIGNAL INPUT
P. OFF [H]	POWER OFF ②	RF. Y. OUT	RF LUMINANCE SIGNAL OUTPUT

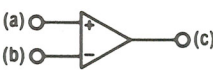
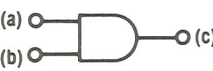
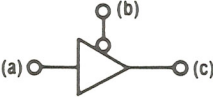
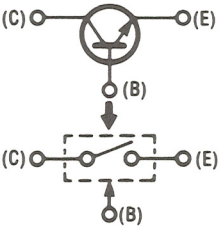
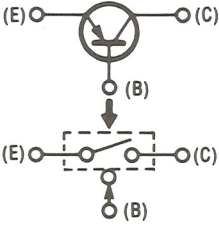
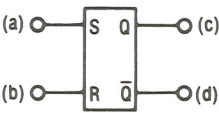
ABBREVIATIONS

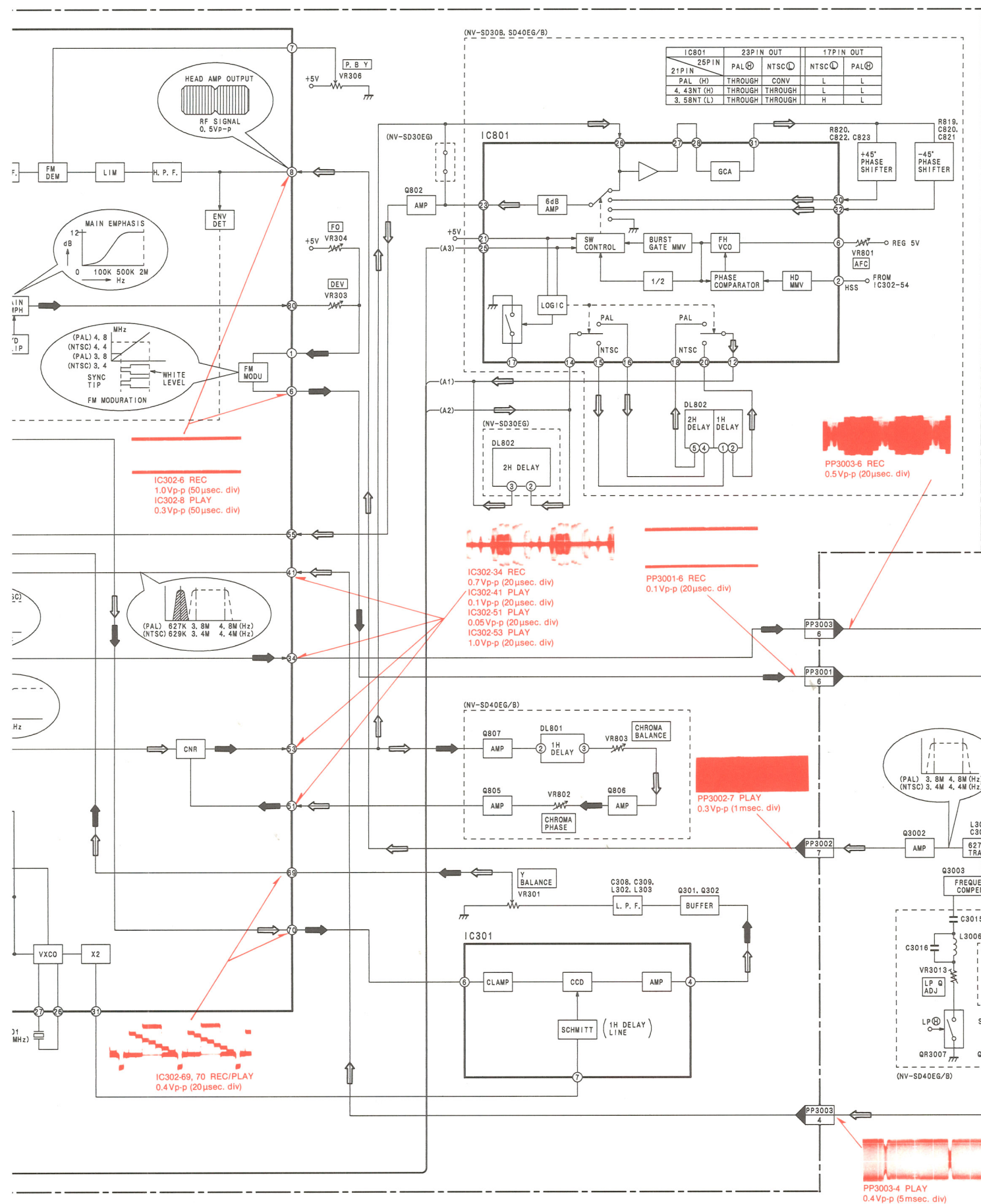
ROTAR. SW	ROTARY SW	T. BUSCLK	TIMER BUS CLOCK
ROTARY	ROTARY SW	T. BUSLSN	TIMER BUS LISTEN
RST	RESET	T. BUSTLK	TIMER BUS TALK
RST [L]	RESET ①	T. END [L]	TAPE END ①
Rch/INST	Rch/INSERT	T. PHOTO	TAKE-UP PHOTO TRANSISTOR
S IN	SERIAL DATA INPUT	TAPE END [L]	TAPE END ①
S OUT	SERIAL DATA OUTPUT	TAPE END [L]/CAM	TAPE END ①/CAMERA PAUSE
S-PHOTO	SUPPLY PHOTO TRANSISTOR	TEST	TEST MODE
S-RL. PLS	SUPPLY REEL PULSE	TPZ	TRAPEZOIDAL WAVE CIRCUIT
S. CLK	SERIAL CLOCK	TRIC [L]	TRIC PLAY ①
S. CLK/AV	SERIAL CLOCK/AV	TRICK [L]	TRIC PLAY ①
S. DATA	SERIAL DATA	TRK. ENV	AUTO TRACKING ENVELOPE DETECT
S. DATA/A	SERIAL DATA	TU. AUDIO	TUNER AUDIO
S. PHOTO	SUPPLY PHOTO TRANSISTOR	TU. GND	TUNER GND
S. TAB [L]	SAFETY TAB SW ON ①	TU. V. IN	TUNER VIDEO SIGNAL INPUT
S/P/N	SECAM/PAL/NTSC	TU. VIDEO	TUNER VIDEO
SC IN	SERIAL CLOCK INPUT	TUN NOR IN	TUNER NORMAL INPUT
SC OUT	SERIAL CLOCK OUTPUT	TUN R	TUNER AUDIO (R)
SCK SELECT	SERIAL CLOCK SELECT	TUN. AUDIO IN	TUNER AUDIO INPUT
SEL OUT [L]	SELECT OUTPUT (L)	TUNER 12V	TUNER 12V
SEL OUT [R]	SELECT OUTPUT (R)	TUNER L	TUNER AUDIO (L)
SHUTTLE 1	SHUTTLE 1	TUNER V IN	TUNER VIDEO SIGNAL INPUT
SIF	SOUND INTERMEDIATE FREQUENCY	TUNER [L]	TUNER AUDIO (L)
SLMUT [H]	INPUT SELECT MUTE ④	TUNER [N]	TUNER AUDIO (NORMAL)
SLNID [+]	SOLENOID (+)	TUNER [R]	TUNER AUDIO (R)
SLNID [-]	SOLENOID (-)	TUNER. 12	TUNER 12V
SLW TR. MM	SLOW TRACKING MONO MULTI	TUOFF [H]	TUNER OFF ④
SLW TR. REF	SLOW TRACKING REFERENCE	TV. AUDIO	TV AUDIO
	VOLTAGE	TV/VTR	TV/VTR
SNS. GND	SENSOR GND	TXTON [L]	TEXT ON ①
SOFT [H]	SOFT TAPE PLAY ④	U. REG45V	UNREGULATOR 45V
SOFT [H]/NORMAL	SOFT TAPE PLAY ④/NORMAL ④	UNREG	UNREGULATOR
SOLENOID ON [L]	SOLENOID ON ①	UNREG19V	UNREGULATOR 19V
SP [H]	SP ④	V. REF	REFERENCE VOLTAGE
SP/L/SLP	SP/LP	V. EE [H]	VIDEO EE ④
SSS [L]	SLOW/STILL/STOP	V. EE [L]	VIDEO EE ①
STEREO LED	STEREO LED	VCO REF	REFERENCE OSCILLATOR
STEREO [H]	STEREO ④	VD. IN	VIDEO SIGNAL INPUT
STEREO [L]	STEREO ①	VD. OUT	VIDEO SIGNAL OUTPUT
STOP. PO	STOP POSITION	VIDEO EE [L]	VIDEO EE ①
STOP/5V	STOP POSITION/5V	VIDEO IN	VIDEO SIGNAL INPUT
STOP1/TAPE SEL	STOP1 POSITION/TAPE SELECT	VIDEO OUT	VIDEO SIGNAL OUTPUT
STOP1/PAL:ST	STOP1 POSITION/PAL	VM	MOTOR VOLTAGE
STOP2. PO	STOP 2 POSITION	VM DOWN [L]	MOTOR VOLTAGE DOWN ①
STOP2/S-TAB	STOP 2 POSITION/SAFETY TAB SW	VSS	VERTICAL SYNC SIGNAL
STREO [H]	STEREO ④	VTR [H]	VTR ④
SUB BIAS	SUB BIAS	VTR. 12V	VTR 12V
SUB. SW	SUB SW	X IN	OSCILLATOR INPUT
SVHS CAS [L]	S-VHS CASSETTE ①	X OUT	OSCILLATOR OUTPUT
SW. 5. DET	SW 5V DETECT		
SYNC [L]	SYNC ①		
SYSCON 5V	SYSTEM CONTROL 5V		
SYSTEM	SYSTEM SW		
T-PHOTO	TAKE-UP PHOTO TRANSISTOR		
T-RL. PLS	TAKE-UP REEL PULSE		

3-2. SYSTEM CONTROL & SERVO BLOCK DIAGRAM



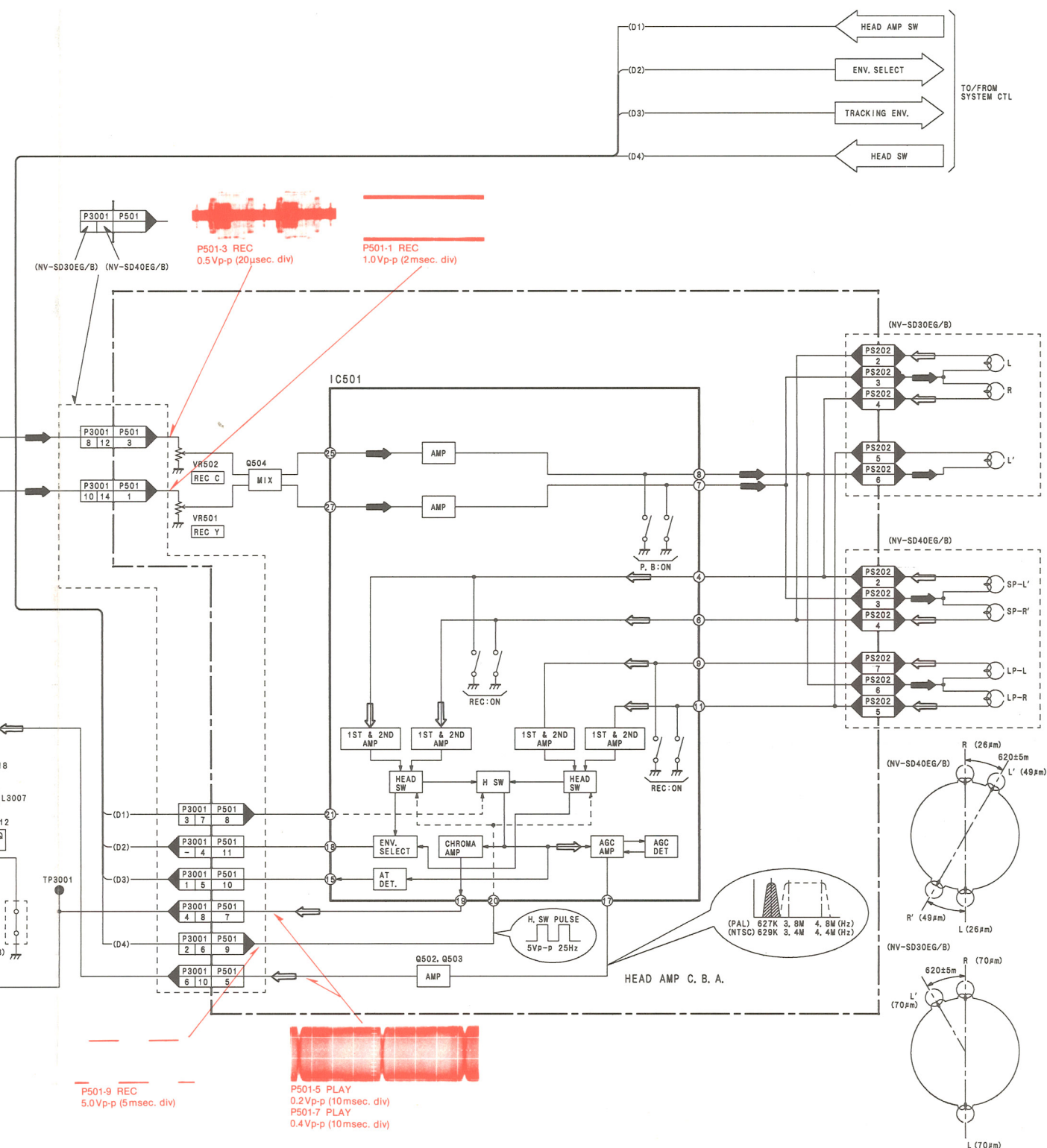


SYMBOL	TRUTH VALUE TABLE																		
INVERTER 	<table><tr><td>IN</td><td>(a)</td><td>H</td><td>L</td></tr><tr><td>OUT</td><td>(b)</td><td>L</td><td>H</td></tr></table>	IN	(a)	H	L	OUT	(b)	L	H										
IN	(a)	H	L																
OUT	(b)	L	H																
COMPARATOR 	<table><tr><td>IN</td><td>(a) (b)</td><td>(a) > (b)</td><td>(a) < (b)</td></tr><tr><td>OUT</td><td>(c)</td><td>H</td><td>L</td></tr></table>	IN	(a) (b)	(a) > (b)	(a) < (b)	OUT	(c)	H	L										
IN	(a) (b)	(a) > (b)	(a) < (b)																
OUT	(c)	H	L																
AND CIRCUIT 	<table><tr><td>IN</td><td>(a)</td><td>L</td><td>L</td><td>H</td><td>H</td></tr><tr><td></td><td>(b)</td><td>L</td><td>H</td><td>L</td><td>H</td></tr><tr><td>OUT</td><td>(c)</td><td>L</td><td>L</td><td>L</td><td>H</td></tr></table>	IN	(a)	L	L	H	H		(b)	L	H	L	H	OUT	(c)	L	L	L	H
IN	(a)	L	L	H	H														
	(b)	L	H	L	H														
OUT	(c)	L	L	L	H														
OR CIRCUIT 	<table><tr><td>IN</td><td>(a)</td><td>L</td><td>L</td><td>H</td><td>H</td></tr><tr><td></td><td>(b)</td><td>L</td><td>H</td><td>L</td><td>H</td></tr><tr><td>OUT</td><td>(c)</td><td>L</td><td>H</td><td>H</td><td>H</td></tr></table>	IN	(a)	L	L	H	H		(b)	L	H	L	H	OUT	(c)	L	H	H	H
IN	(a)	L	L	H	H														
	(b)	L	H	L	H														
OUT	(c)	L	H	H	H														
THREE STATES BUFFER 	<table><tr><td>IN</td><td>(a) (b)</td><td>H</td><td>L</td><td>H or L</td></tr><tr><td>OUT</td><td>(c)</td><td>H</td><td>L</td><td>※</td></tr></table> ※ High Impedance	IN	(a) (b)	H	L	H or L	OUT	(c)	H	L	※								
IN	(a) (b)	H	L	H or L															
OUT	(c)	H	L	※															
TR. SW (NPN TYPE) 	<table><tr><td>BASE</td><td>H</td><td>L</td></tr><tr><td>TR. SW</td><td>ON</td><td>OFF</td></tr></table>	BASE	H	L	TR. SW	ON	OFF												
BASE	H	L																	
TR. SW	ON	OFF																	
TR. SW (PNP TYPE) 	<table><tr><td>BASE</td><td>H</td><td>L</td></tr><tr><td>TR. SW</td><td>OFF</td><td>ON</td></tr></table>	BASE	H	L	TR. SW	OFF	ON												
BASE	H	L																	
TR. SW	OFF	ON																	
R-S TYPE FLIP-FLOP 	<table><tr><td>IN</td><td>(a) (b)</td><td>L</td><td>L</td><td></td></tr><tr><td></td><td>(c)</td><td>※</td><td>L</td><td>H</td></tr><tr><td>OUT</td><td>(d)</td><td>◆</td><td>H</td><td>L</td></tr></table> ※ Initial condition is maintained. ◆ Initial condition is reversed.	IN	(a) (b)	L	L			(c)	※	L	H	OUT	(d)	◆	H	L			
IN	(a) (b)	L	L																
	(c)	※	L	H															
OUT	(d)	◆	H	L															



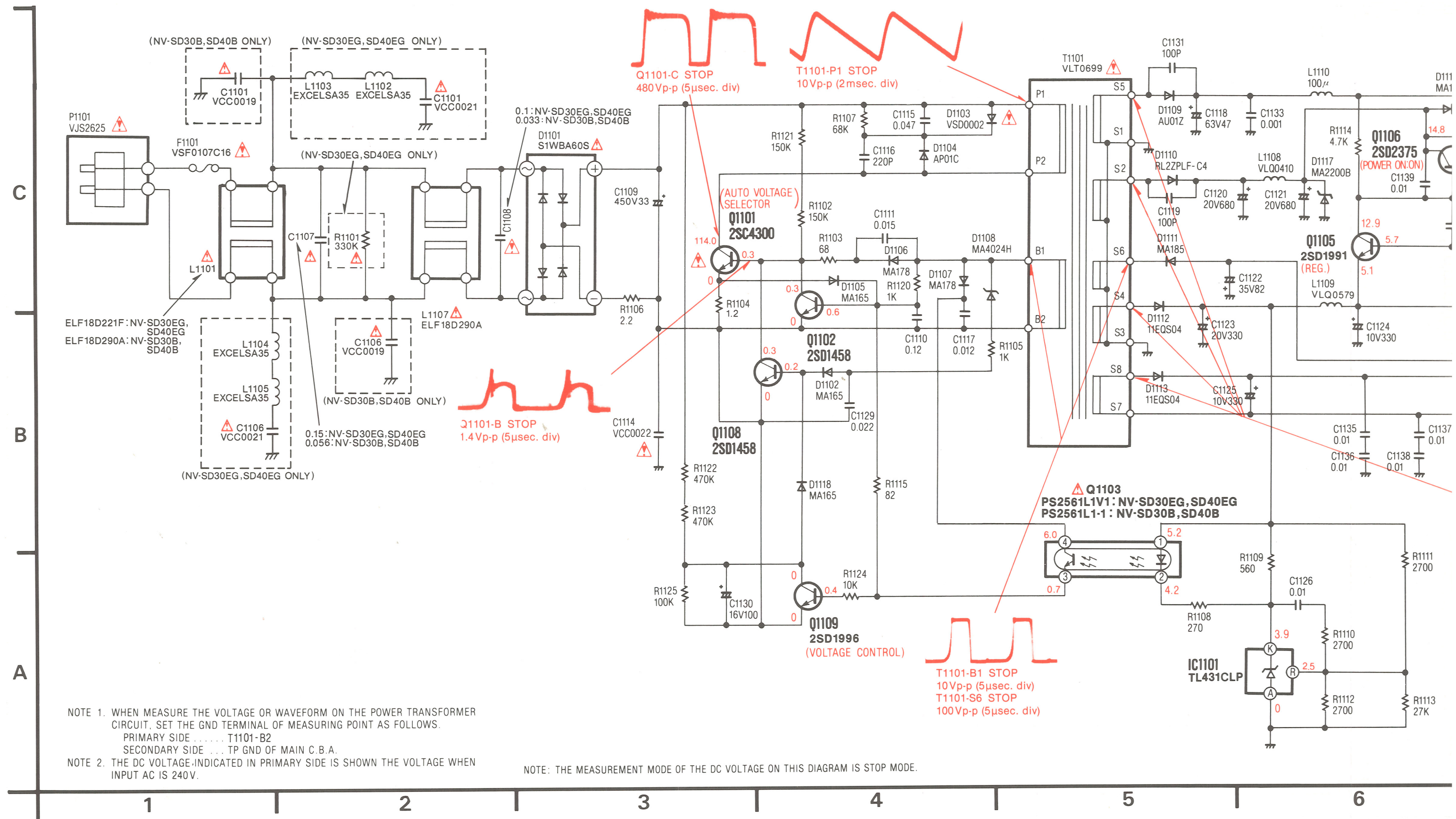
MAIN SIGNAL PATH IN REC MODE

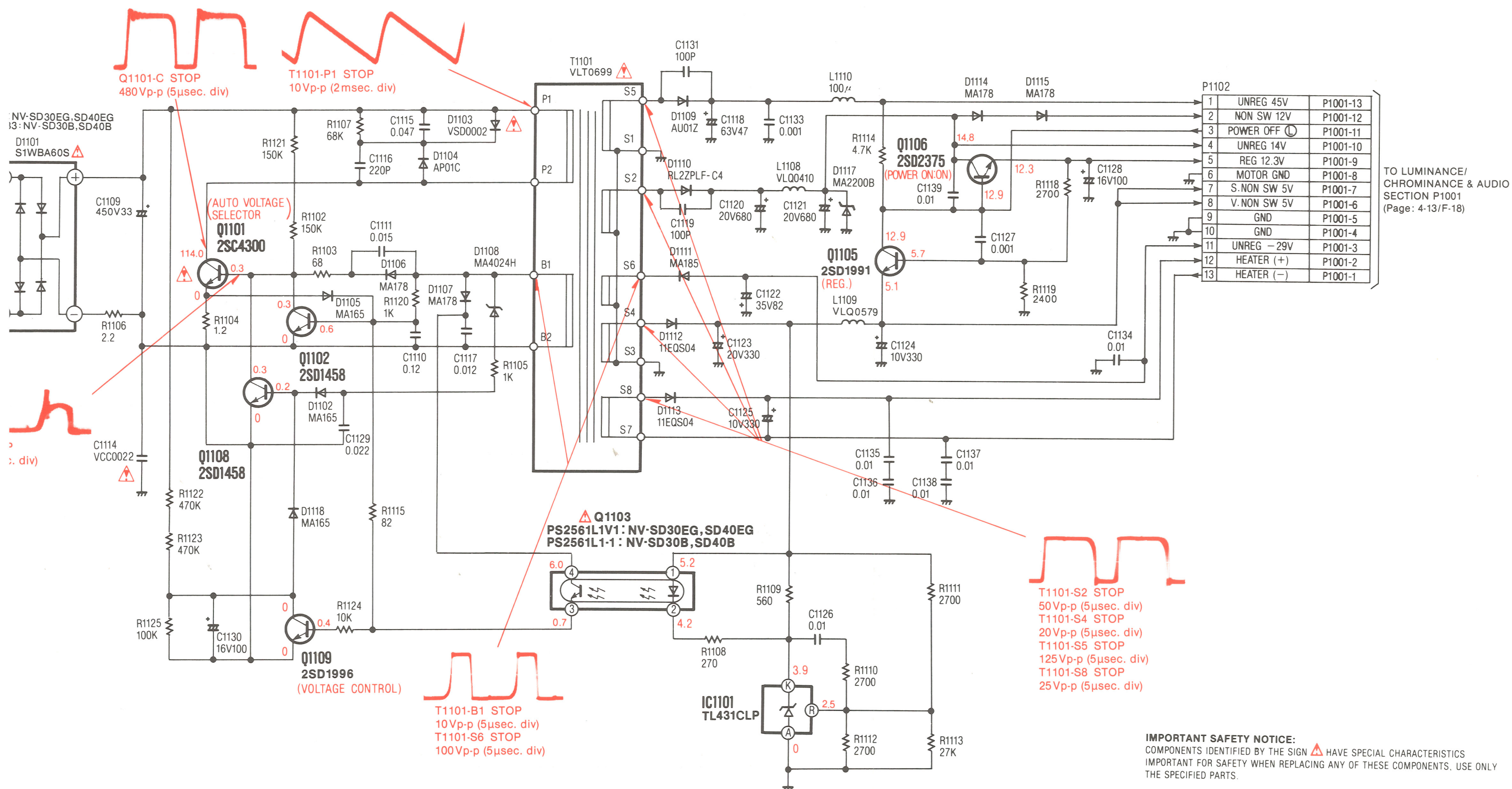
MAIN SIGNAL PATH IN PLAYBACK MODE



SECTION 4 SCHEMATIC DIAGRAMS

4-1. POWER SCHEMATIC DIAGRAM





NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

3

4

5

6

7

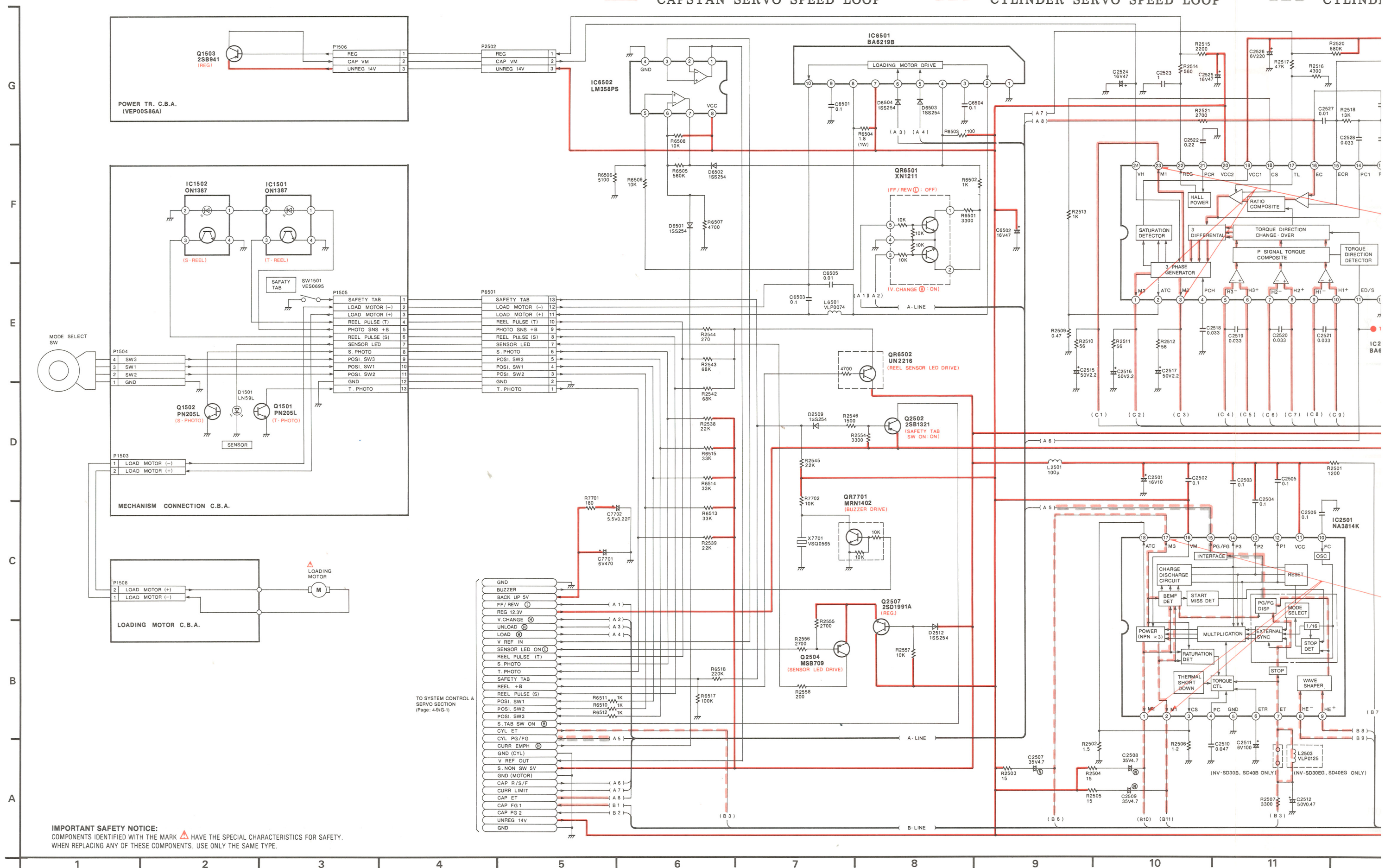
8

4-2. SUB SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

CAPSTAN SERVO SPEED LOOP

CYLINDER SERVO SPEED LOOP

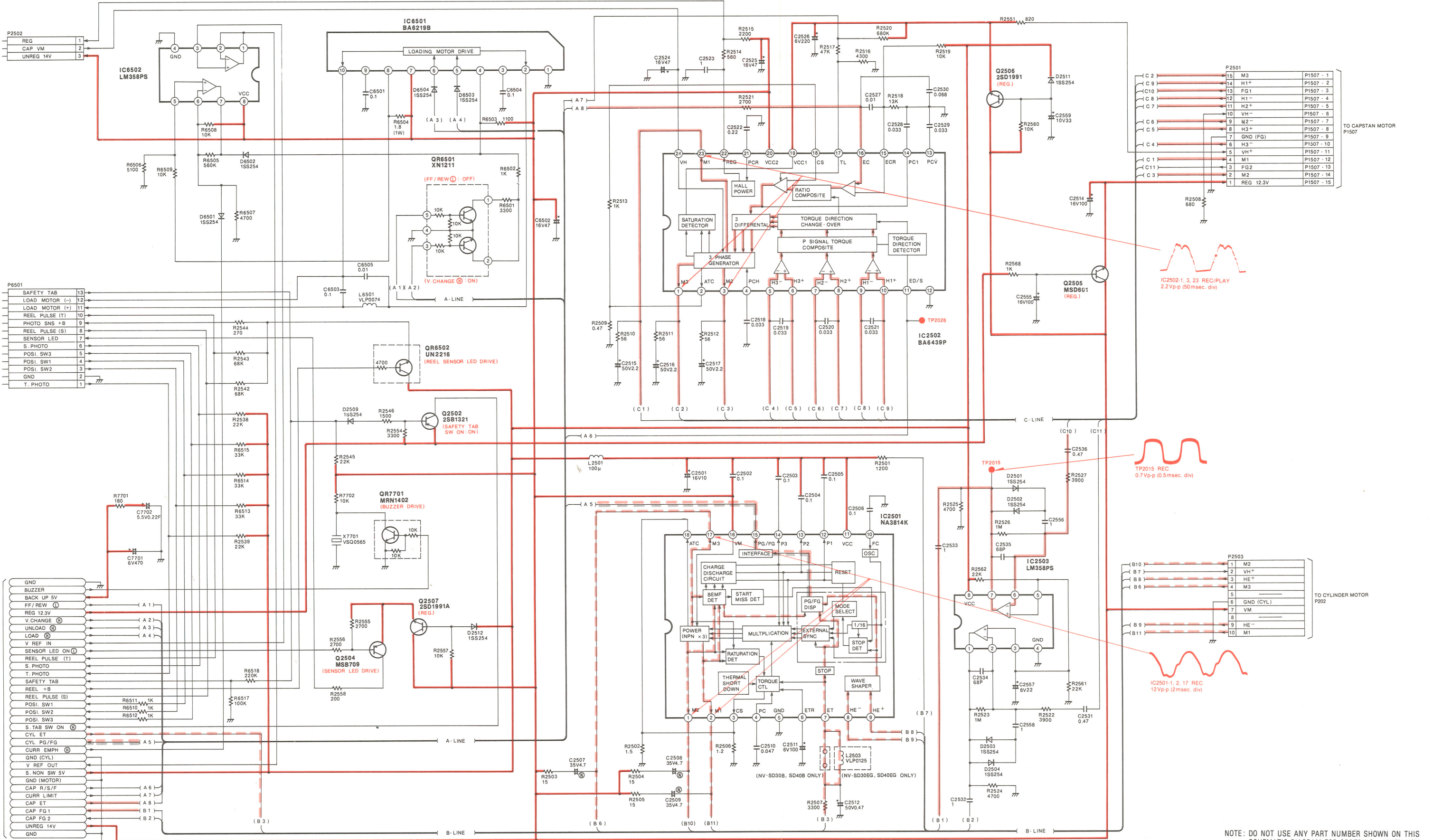
CYLINDER



CAPSTAN SERVO SPEED LOOP

CYLINDER SERVO SPEED LOOP

CYLINDER SERVO PHASE LOOP



NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

SUB SERVO ICs DC VOLTAGE CHART (SP MODE)

REF. NO.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	14.4	14.4	0.1	0.5	0	2.5	2.5	0.6	0.6	2.6	5.1	3.7	3.6	3.8	0.8	13.9	14.4	0.1		
PLAY	14.1	12.8	0.1	0.6	0	2.5	2.4	0.6	0.6	2.6	5.1	3.6	3.6	3.6	1.4	13.7	14.2	0.1		
REC	13.7	14.0	0.1	0.6	0	2.5	2.5	0.6	0.6	2.6	5.1	3.6	3.8	3.7	1.4	13.6	14.0	0.1		
F.F	13.0	13.9	0.1	0.5	0	2.5	2.5	0.6	0.6	2.6	5.1	3.7	3.8	3.6	1.1	13.7	14.1	0.1		
REW	12.7	13.9	0.1	0.6	0	2.5	2.5	0.6	0.6	2.7	5.1	3.7	3.7	3.7	1.4	13.6	13.8	0.1		
REF. NO.	IC2502																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	2.0	0	2.0	1.5	2.3	2.3	2.3	2.3	2.3	2.3	2.1	0	0	0.4	2.9	0.2	0.4	0	5.1	13.9
PLAY	2.8	0.1	2.8	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.7	0.7	2.9	2.7	0.4	0.1	5.1	13.7
REC	2.7	0.1	2.7	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.7	0.7	2.9	2.7	0.4	0.1	5.1	13.7
F.F	7.4	0.1	7.1	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.6	0.7	2.9	2.5	0.4	0.1	5.1	13.7
REW	7.3	0.1	5.6	1.5	2.3	2.3	2.3	2.3	2.3	2.3	5.1	0	0.7	0.7	2.9	2.4	0.4	0.1	5.0	13.6
REF. NO.	IC2502																			
MODE	21	22	23	24																
STOP	1.3	13.2	2.0	4.5																
PLAY	2.0	12.4	0.1	4.5																
REC	2.0	12.3	0.7	4.5																
F.F	11.5	3.5	7.3	13.5																
REW	11.5	12.2	7.2	13.5																
REF. NO.	IC2503																			
MODE	1	2	3	4	5	6	7	8												
STOP	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
PLAY	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
REC	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
F.F	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
REW	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
REF. NO.	IC6501										IC6502									
MODE	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8		
STOP	0	0.3	0.1	6.7	0	0	13.9	13.9	0.1	0.3	2.5	2.5	2.5	0	4.7	0.7	12.7	13.9		
PLAY	0	0.5	0.1	6.6	0	0	13.7	13.7	0.1	0.5	2.5	2.5	2.5	0	4.6	0.7	12.4	13.7		
REC	0	0.3	0.1	6.5	0	0	13.5	13.5	0.1	0.3	2.6	2.6	2.5	0	4.6	0.7	12.3	13.5		
F.F	0	0.2	0.1	13.6	0	0	13.7	13.7	0.1	0.2	2.5	2.5	2.5	0	4.6	0.7	13.1	13.7		
REW	0	0.8	0.4	13.5	0	0	13.6	13.6	0.1	0.5	2.5	2.5	2.5	0	4.6	0.7	13.1	13.6		

SUB SERVO TRANSISTORS DC VOLTAGE CHART (SP MODE)

REF. NO.	Q2502			Q2504			Q2505			Q2506			Q2507					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
STOP	12.2	12.2	11.5	5.2	-0.1	5.1	11.5	13.9	12.2	5.1	13.9	5.7	5.2	13.9	5.7			
PLAY	12.2	12.2	11.5	5.0	5.0	4.3	11.5	13.7	12.2	5.1	13.7	5.7	5.0	13.7	5.7			
REC	12.2	12.1	11.5	5.0	5.0	4.3	11.5	13.5	12.2	5.1	13.5	5.7	5.0	13.5	5.7			
F.F	12.2	12.2	11.5	5.0	5.0	4.3	11.5	13.7	12.2	5.1	13.7	5.7	5.0	13.7	5.7			
REW	12.2	12.2	11.5	5.0	5.0	4.2	11.5	13.6	12.2	5.1	13.6	5.7	5.0	13.6	5.7			
REF. NO.	QR6501						QR6502											
MODE	1	2	3	4	5		E	C	B									
STOP	0	0.1	5.0	0	5.0		5.0	5.1	6.8									
PLAY	0	0.1	5.0	0	5.0		5.0	5.1	6.8									
REC	0	0.1	5.1	0	5.0		5.1	5.1	9.8									
F.F	13.4	13.6	0	0	0		5.0	5.1	6.8									
REW	13.5	13.5	0	0.1	0		5.0	5.1	6.8									

VOLTAGE CHART

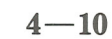
SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (SP MODE)

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0.4	4.9	0	4.9	0.1	2.7	0	0	0.4	5.1	5.1	0	0	0	0	2.5	4.8	5.0	5.0	0
PLAY	0.1	4.9	0	0	0.1	5.1	0	0	4.0	1.5	5.1	0	0	0	0	2.5	4.8	5.0	5.0	0
REC	0.6	5.0	0	0	4.8	5.1	0	0	4.6	5.0	5.1	0	0	0	0	2.5	5.0	5.0	5.0	0
F.F	0	5.0	4.9	0	2.4	5.1	0	0	3.0	5.1	5.1	0	0	0	0	2.5	4.9	4.9	1.6	0
REW	0	5.1	5.1	0	1.6	5.1	0	0	2.6	5.1	5.1	0	0	0	0	2.5	4.7	4.9	1.7	0
REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	5.0	5.1	0.2	2.5	0.3	2.2	2.0	2.5	0	2.5	2.4	2.0	5.0	0	2.0	2.0	2.0	2.5	2.2	2.5
PLAY	5.1	5.1	2.6	2.4	3.8	2.5	2.5	2.5	0	2.5	2.7	2.4	5.0	0	0	0	2.5	2.5	0	2.8
REC	0	5.1	2.7	2.5	0.4	2.5	2.5	2.5	0	2.5	2.4	2.7	5.0	3.5	3.7	0	2.5	2.5	0	2.5
F.F	5.1	5.1	2.2	2.5	2.7	2.5	2.5	2.5	0	2.5	2.5	2.6	5.0	0	0	0	2.5	1.6	0	2.9
REW	5.1	5.1	2.3	2.4	2.1	2.8	2.1	2.3	0	2.5	2.5	2.6	5.0	2.6	2.6	2.0	2.5	1.8	0	2.9
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	2.5	5.1	1.4	3.6	0	4.3	0	5.1	0	0	0	5.0	1.4	5.1	5.0	5.1	0	0	0	0.3
PLAY	2.4	5.1	0.8	3.8	3.8	4.5	0	5.1	0	0	0	0	1.3	0	0	0	0	0	0	0
REC	2.5	5.1	0.8	3.8	0	4.6	0	0	0	0	0	5.1	1.3	0.1	5.1	5.1	0	0	0	5.1
F.F	2.5	5.1	1.5	3.7	0	4.3	0	5.1	0	0	0	5.1	1.3	0.1	0	5.1	0	0	0	5.1
REW	2.5	5.1	1.1	3.7	0	4.4	0	5.1	0	0	0	4.9	1.0	0.1	0	5.1	0	0	0	5.0
REF. NO.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	5.1	2.1	4.6	4.0	0	0	0	0	0.3	5.1	0	5.1	5.1	0	0.1	5.0	0	0	5.1	0
PLAY	5.1	0	4.9	4.5	0	0	0	0	0.3	5.1	0	0	0	0	0.1	5.0	0	5.1	5.1	0
REC	5.1	0	4.6	4.4	5.1	5.1	5.1	5.1	5.1	5.1	0	0	5.1	0	0.1	5.0	0	0	5.1	0
F.F	5.1	0	4.6	4.6	0	0	0	0	0.3	5.1	0	0	5.1	0	0.1	0	0	0	5.1	0
REW	5.1	5.1	4.6	4.6	0	0	0	0	0.3	5.1	0	5.1	5.1	0	0.1	0	0	0	5.1	0
REF. NO.	IC6001																			
MODE	81	82	83	84																
STOP	0	2.6	2.6	3.9																
PLAY	0	2.6	2.6	4.1																
REC	0	2.6	2.6	4.3																
F.F	0	2.6	2.6	4.1																
REW	0	2.6	2.6	3.9																
REF. NO.	IC6710																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0.1	0.1	0.5	5.1
PLAY	0	3.9	4.9	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	2.2	0	5.1	0.1	0.1	0.5	5.1
REC	0	4.1	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0.1	0.1	2.2	5.1
F.F	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.0	0.1	0.1	0.5	4.8
REW	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0	0.1	2.2	5.1

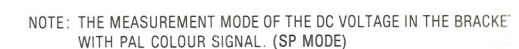
SYSTEM CONTROL & SERVO TRANSISTORS DC VOLTAGE CHART (SP MODE)

REF. NO.	Q2001			Q2002			Q2003			Q2004								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	2.9	5.1	3.4	5.1	4.8	5.1	0.6	0	0	0.3	5.1	0.6						
PLAY	2.9	5.1	3.4	5.1	4.7	5.1	0.6	0	0	0.3	5.1	0.6						
REC	2.9	5.1	3.3	5.1	4.7	5.1	0.6	0	0	0.3	5.1	0.6						
F.F	2.9	5.1	3.4	5.1	4.6	5.0	0.6	0	0	0.3	5.1	0.6						
REW	2.9	5.1	3.5	5.1	4.8	5.1	0.6	0	0	0.3	5.1	0.6						
REF. NO.	QR2001			QR2002			QR2006			QR2007			QR2008					
MODE	E	C	B	1	2	3	4	5		E	C	B	E	C	B	E	C	B
STOP	5.1	0.3	5.1	0	0	5.0	1.8	5.0		5.1	5.1	0.3	5.1	0	5.1	0	5.1	5.1
PLAY	5.1	0.2	5.1	0	0	5.0	0	5.0		0	5.1	0.2	5.1	5.1	0	0.3	5.1	0
REC	5.1	0.2	5.1	0	0	5.0	0	5.0		5.1	5.1	0.2	5.1	5.1	0	0.2	5.1	0
F.F	5.1	0.2	5.1	0	2.0	0	0	0		4.3	5.1	0.2	5.1	5.0	0	0.3	5.1	0
REW	5.1	0.3	5.1	0	1.2	0	0	0		5.1	5.1	0.3	5.1	3.0	5.1	4.5	5.1	5.1
REF. NO.	QR2009			QR2010			QR6005			QR6710								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	0.3	-0.2	5.1	0.4	0.3	5.1	0	1.1	4.1	5.1	0.3	5.0						
PLAY	0.2	-0.3	0	-0.1	0.2	0	0	1.1	4.1	5.1	0.3	4.9						
REC	0.2	-0.2	0	-0.1	0.2	0	0	1.4	3.7	5.1	0.3	5.1						
F.F	0.2	-3.7	0	-0.1	0.2	0	0	1.4	3.5	5.1	0.3	4.9						
REW	0.4	-1.0	5.1	0.4	0.4	5.1	0	1.4	3.7	5.1	0.3	4.9						

CAPSTAN

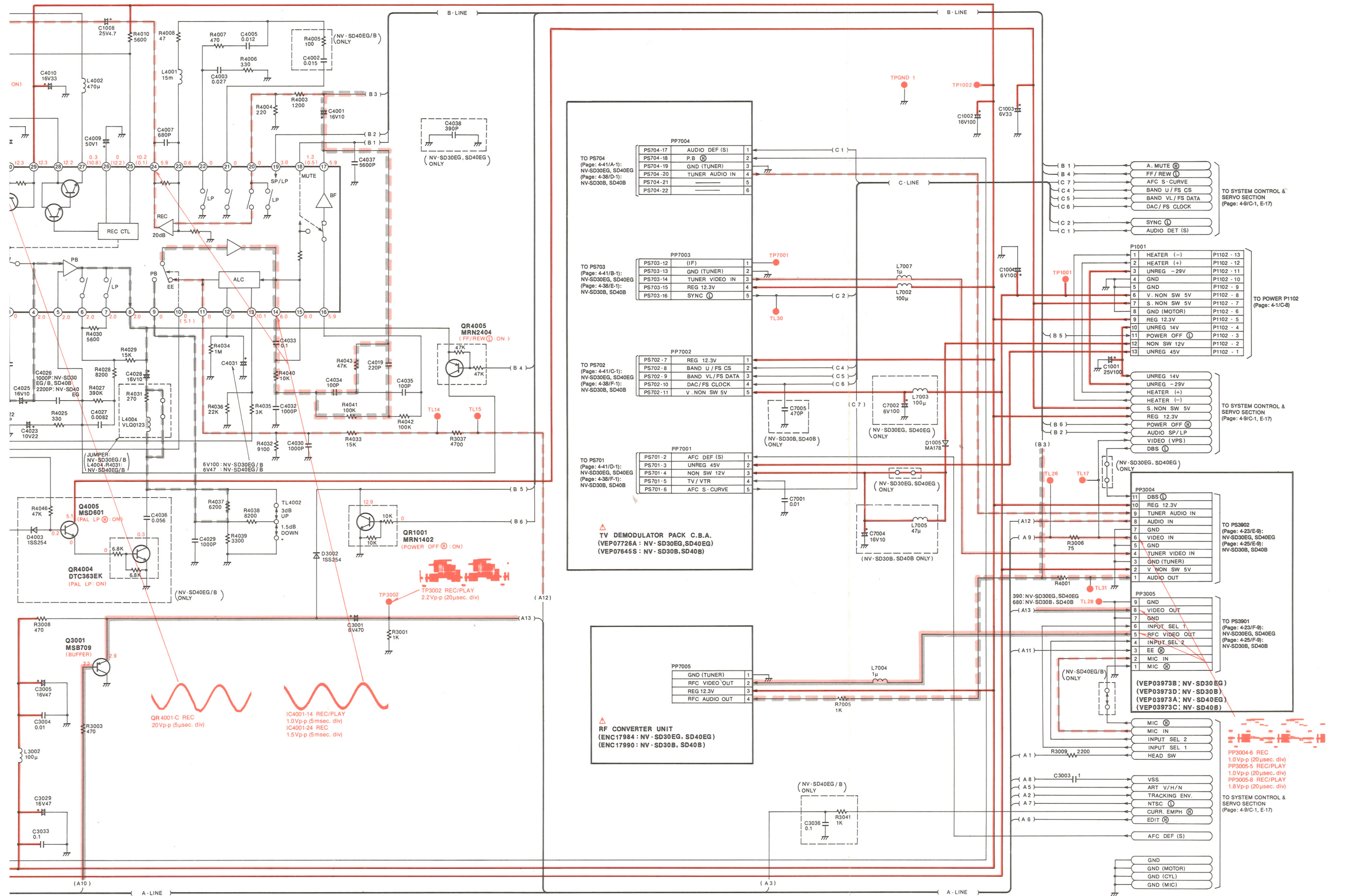


VIDEO MAIN SIGNAL PA'

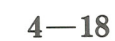


— VIDEO MAIN SIGNAL PATH IN REC MODE
— VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

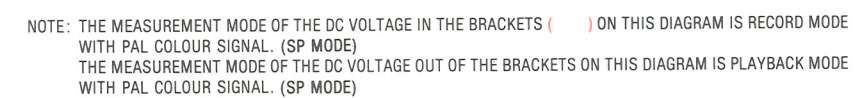
--- AUDIO MAIN SIGNAL PATH IN REC MODE
--- AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



— MAIN SIGNAL PATH IN REC MODE
— MAIN SIGNAL PATH IN PLAYBACK MODE

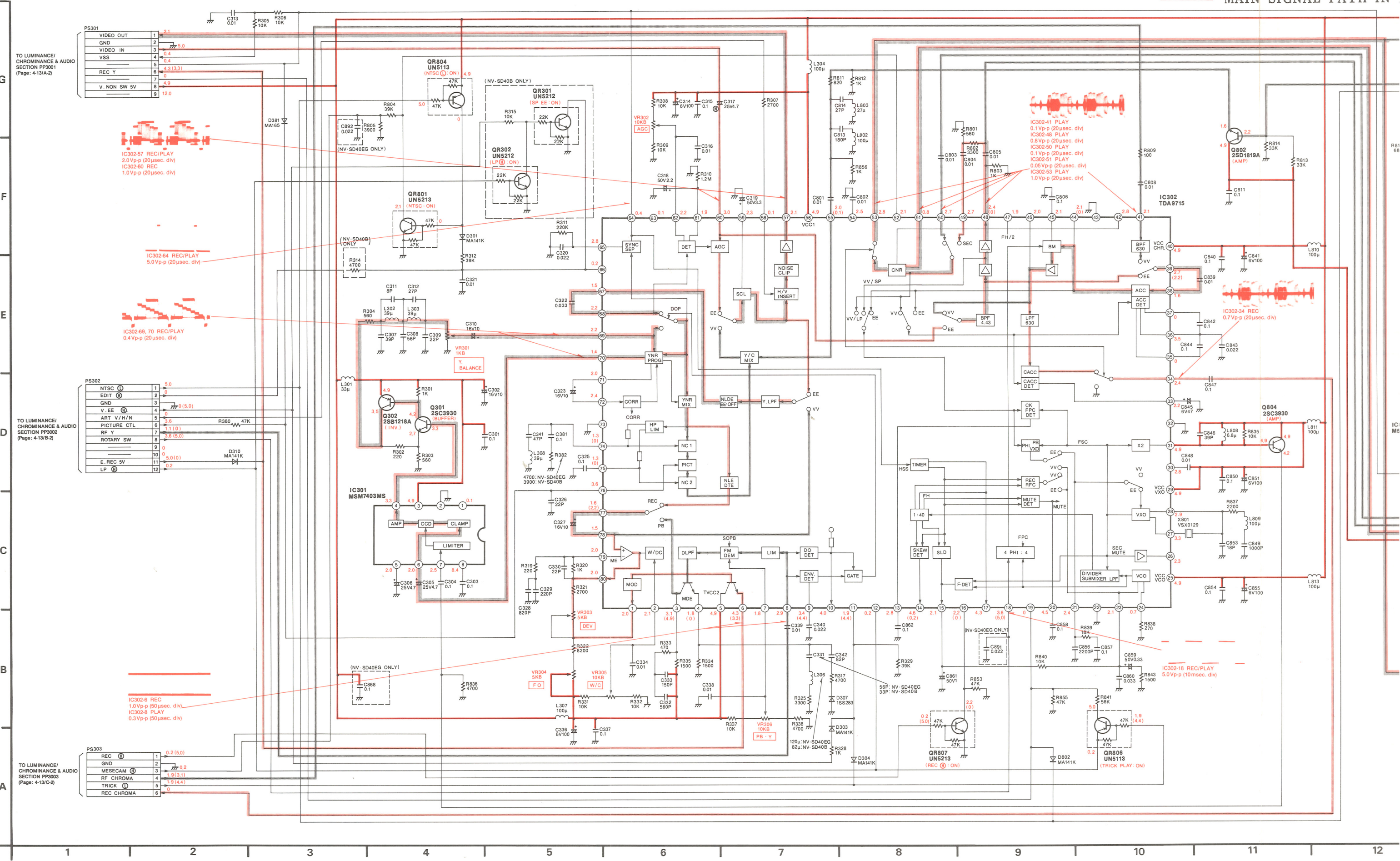


— MAIN SIGNAL PATH IN REC MODE
— MAIN SIGNAL PATH IN PLAYBACK MODE

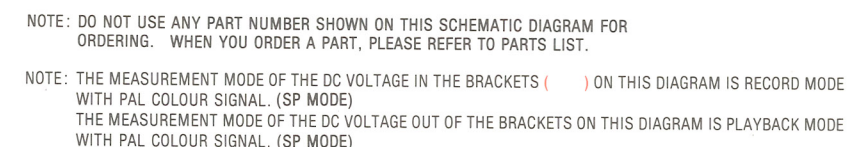


4-6. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM (NV-SD40EG/B)

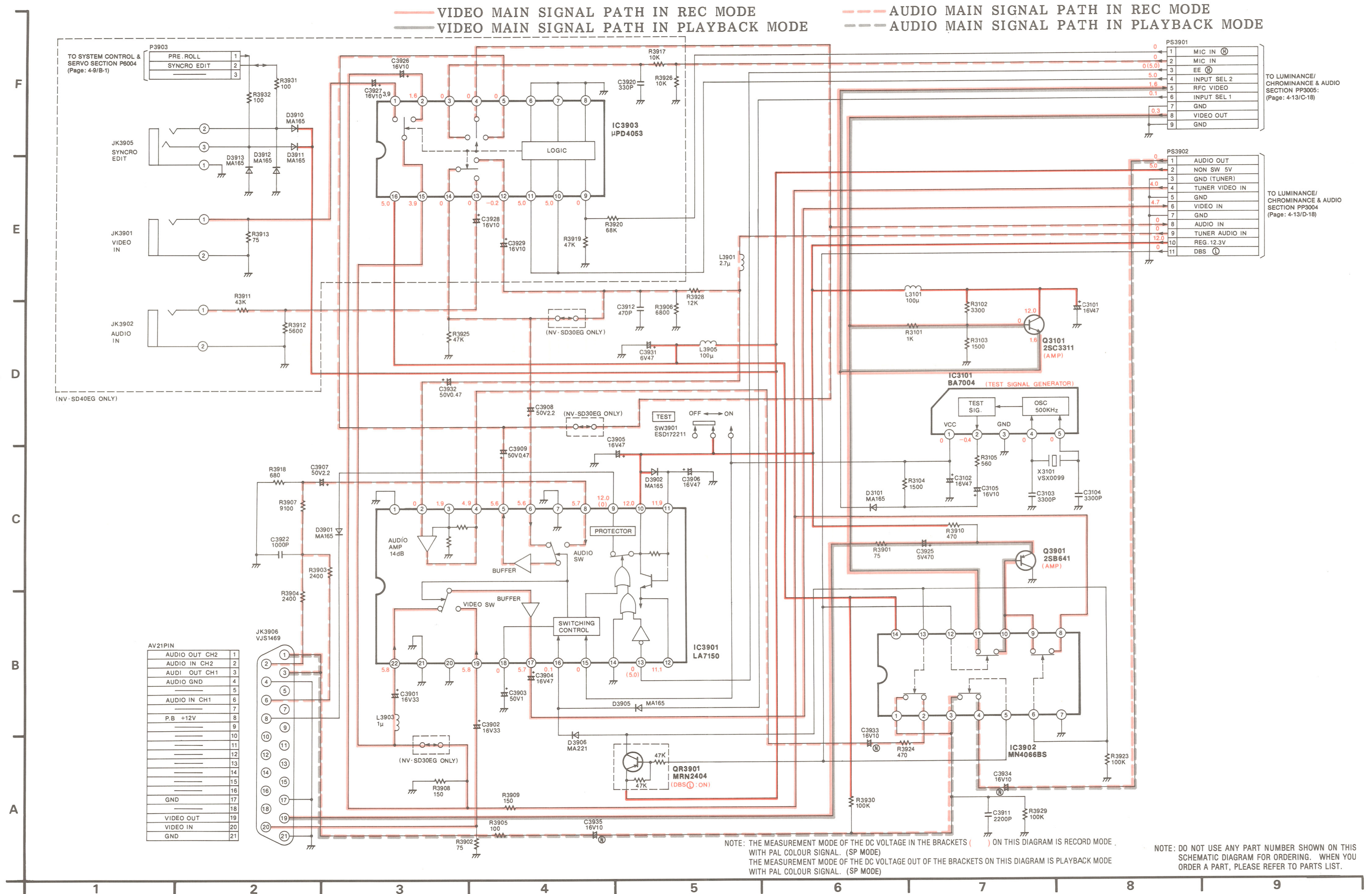
MAIN SIGNAL PATH IN



— MAIN SIGNAL PATH IN REC MODE — MAIN SIGNAL PATH IN PLAYBACK MODE



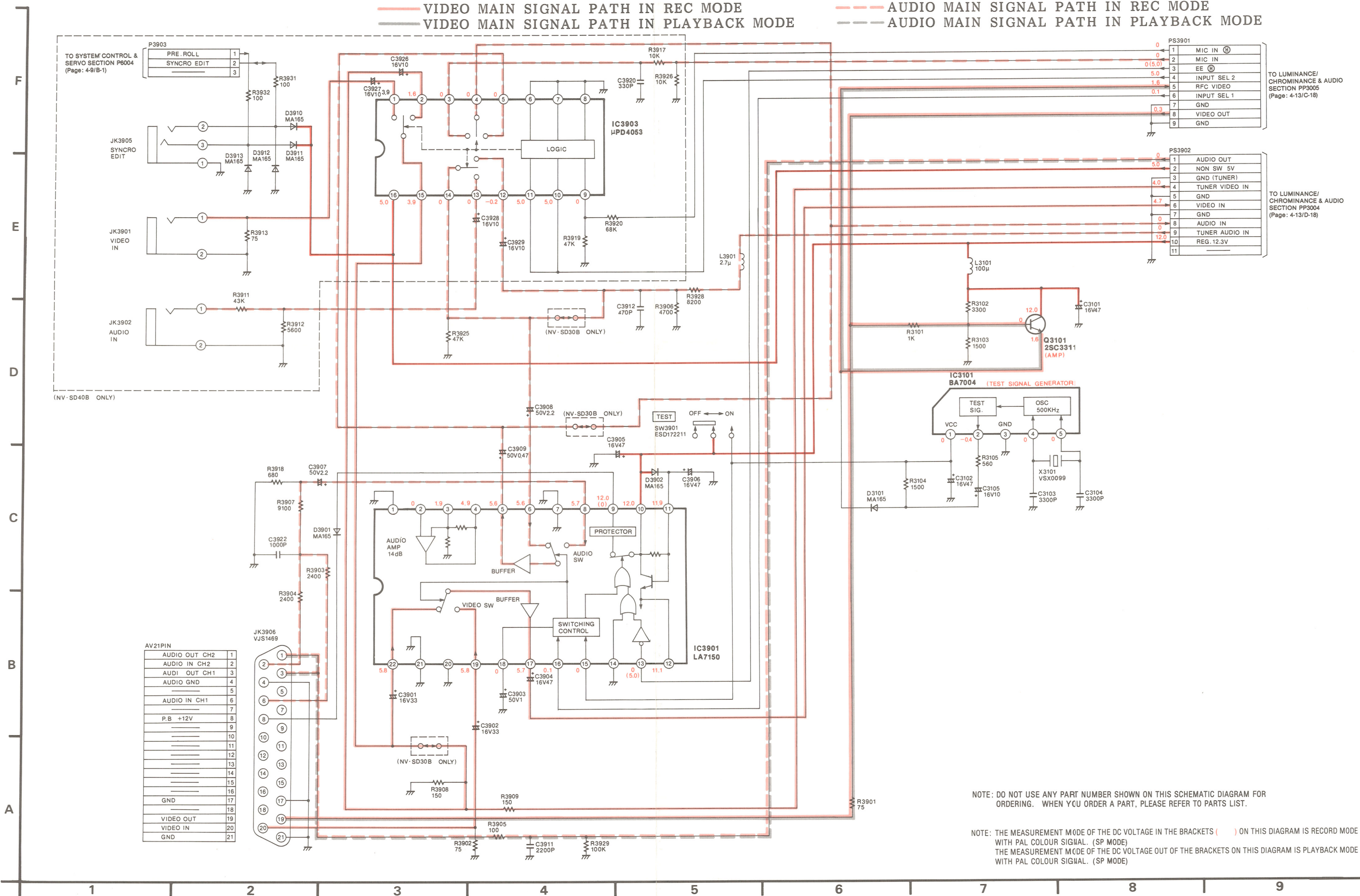
4-7. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM (NV-SD30EG, SD40EG)



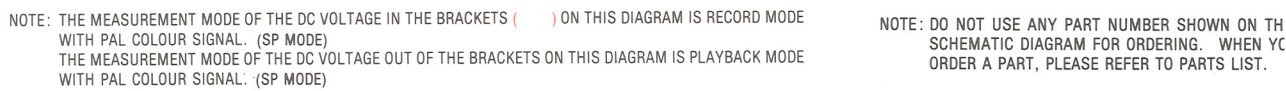
4-8. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM (NV-SD30B, SD40B)

— VIDEO MAIN SIGNAL PATH IN REC MODE
 — VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

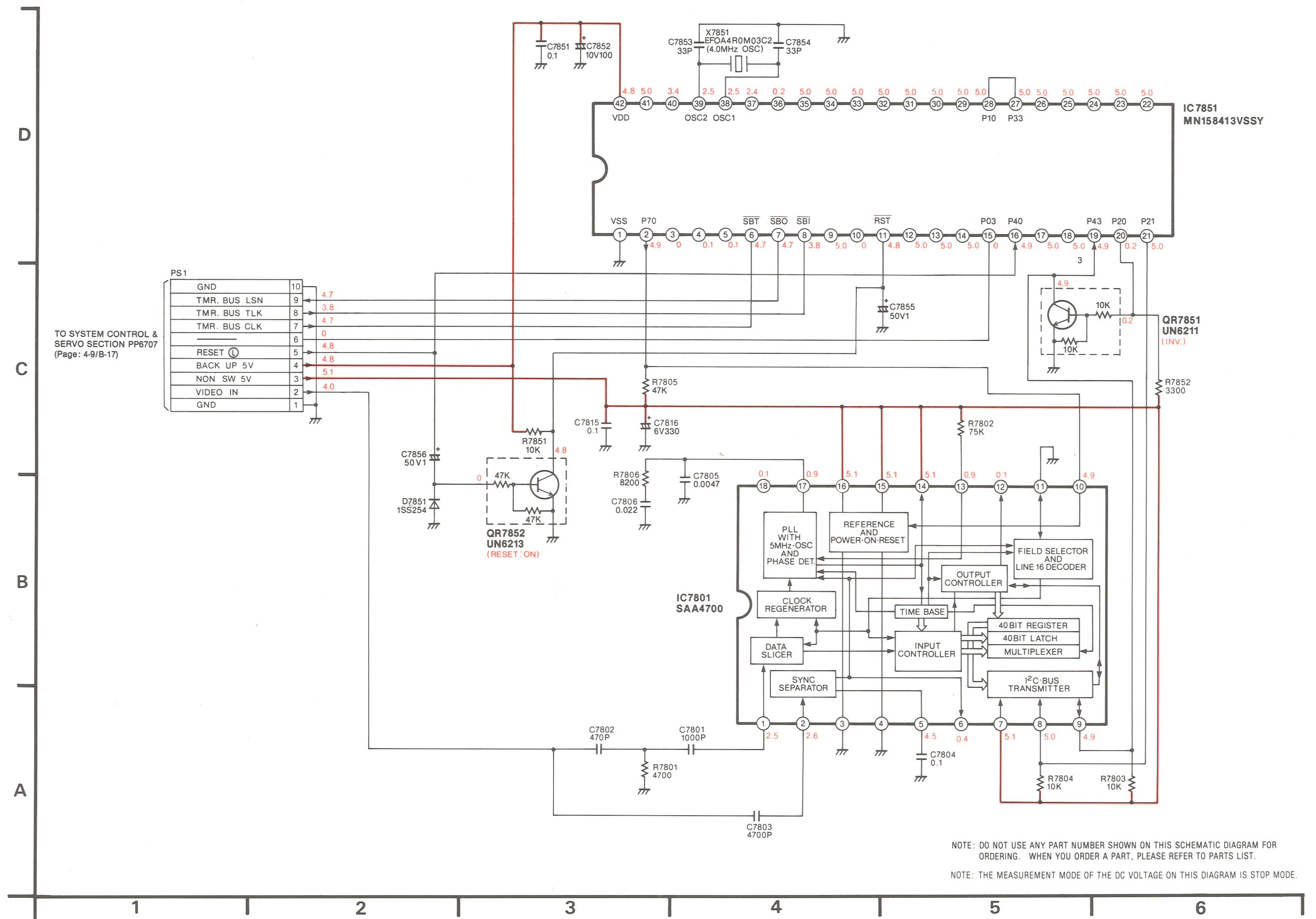
--- AUDIO MAIN SIGNAL PATH IN REC MODE
 --- AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



A
B
C
D
E
F



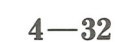
4-10. VPS PACK SCHEMATIC DIAGRAM



NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

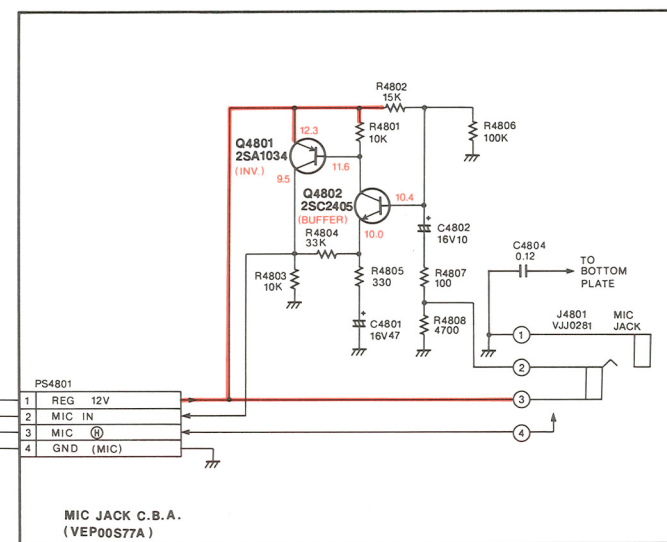
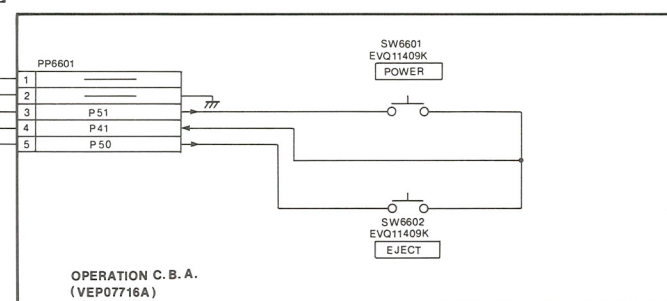
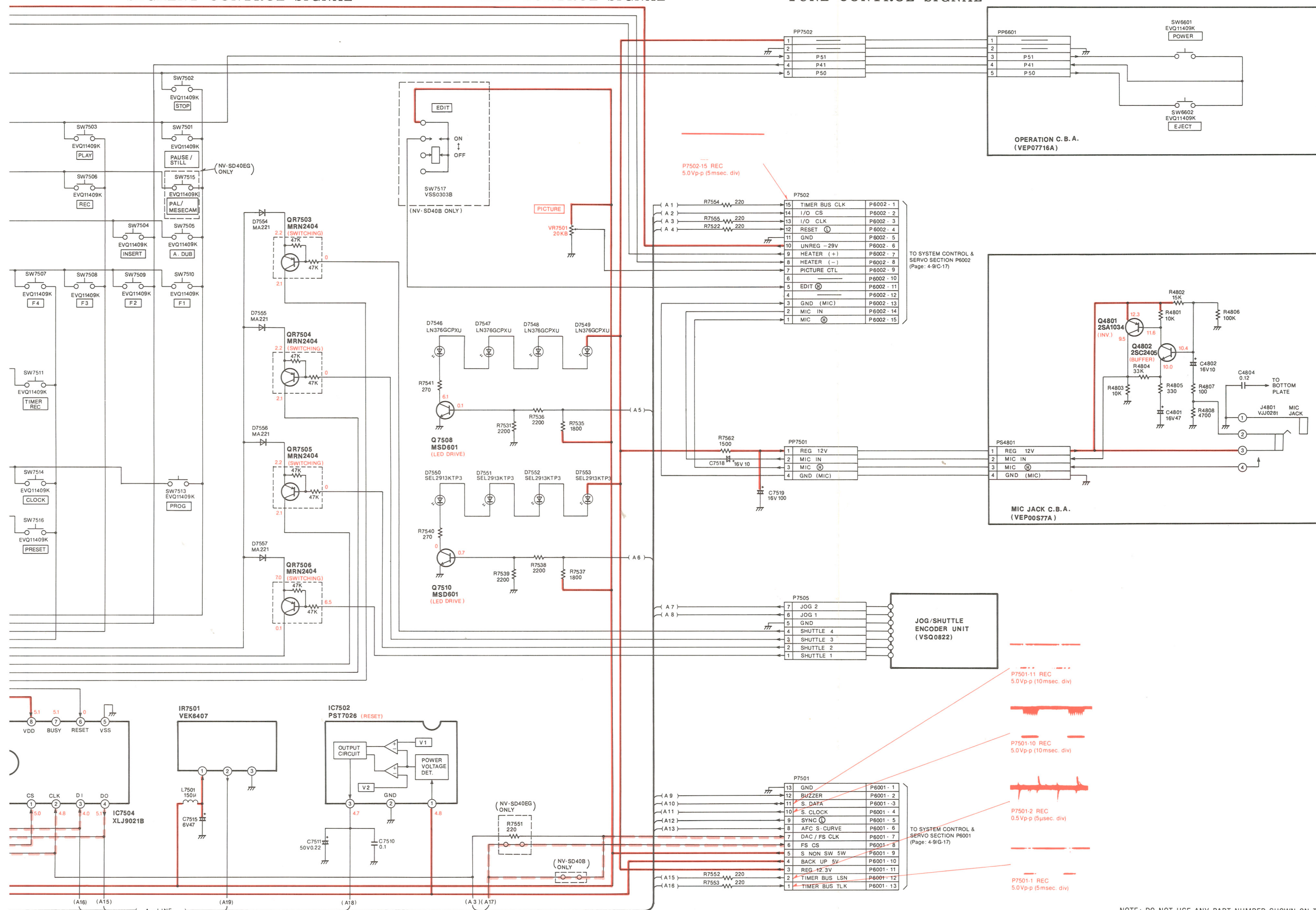
SEGMENT CONTI



SEGMENT CONTROL SIGNAL

GRID CONTROL SIGNAL

TUNE CONTROL SIGNAL

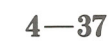


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

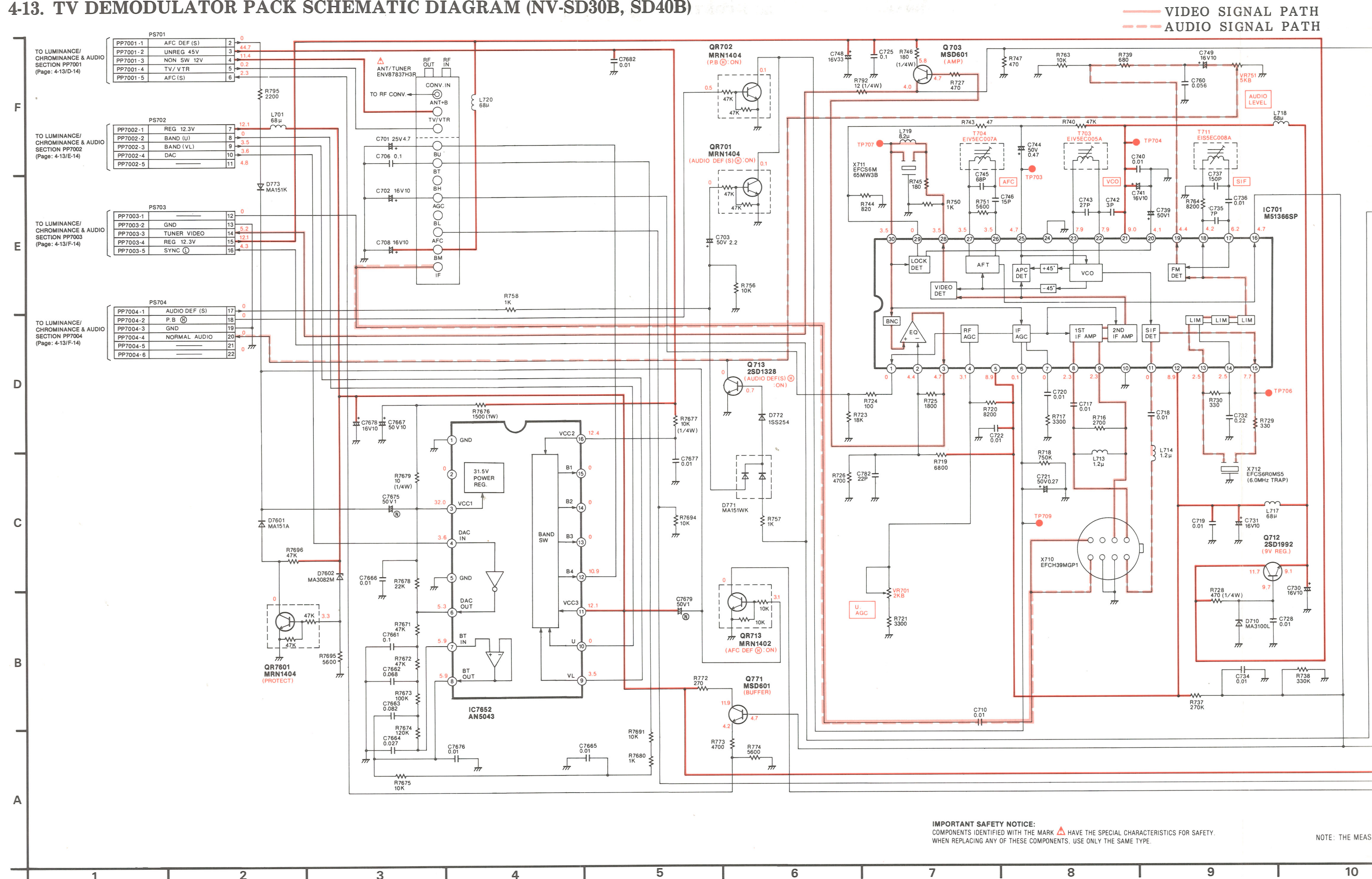
TI



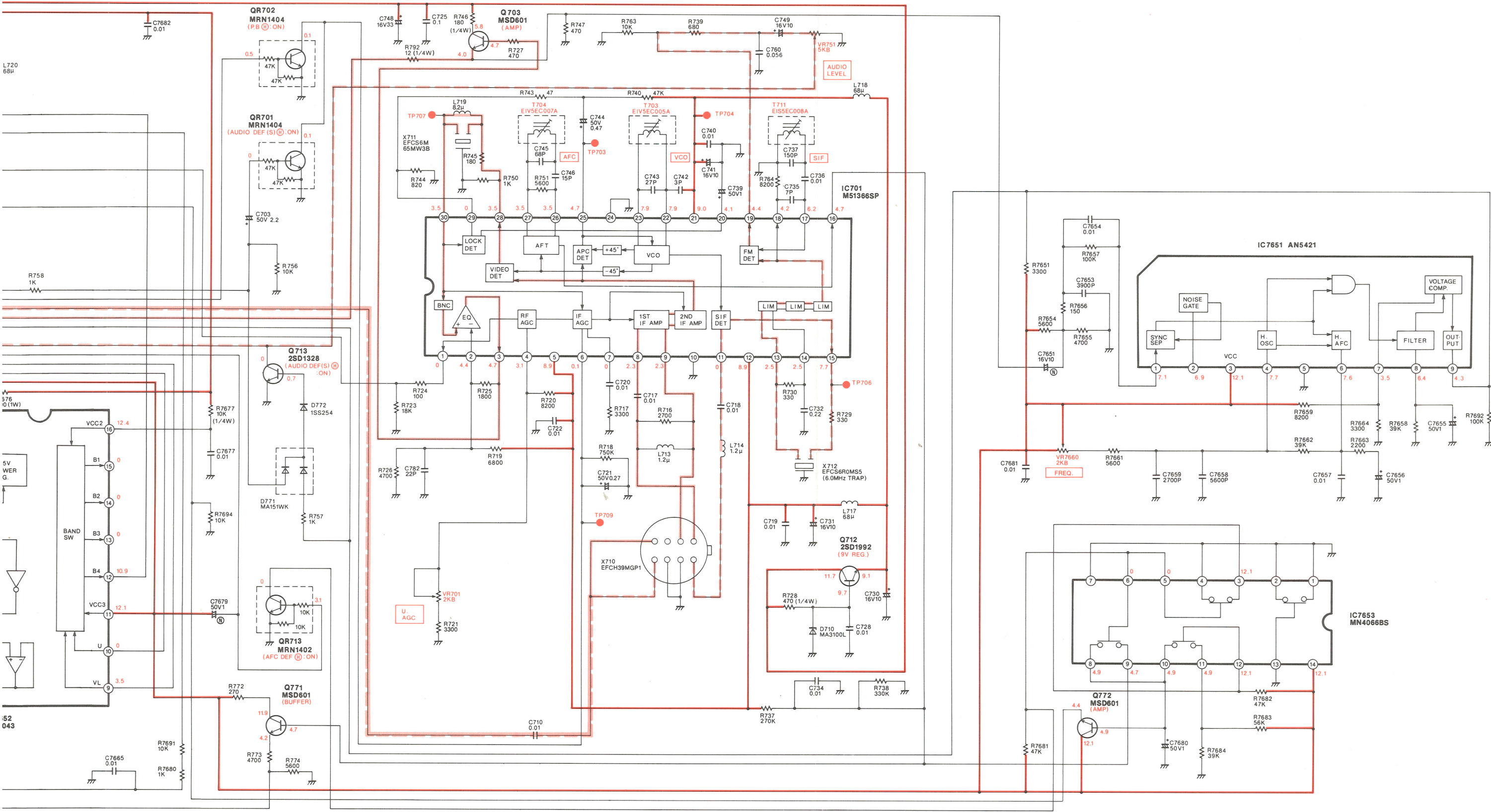


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-13. TV DEMODULATOR PACK SCHEMATIC DIAGRAM (NV-SD30B, SD40B)



— VIDEO SIGNAL PATH
- - - AUDIO SIGNAL PATH

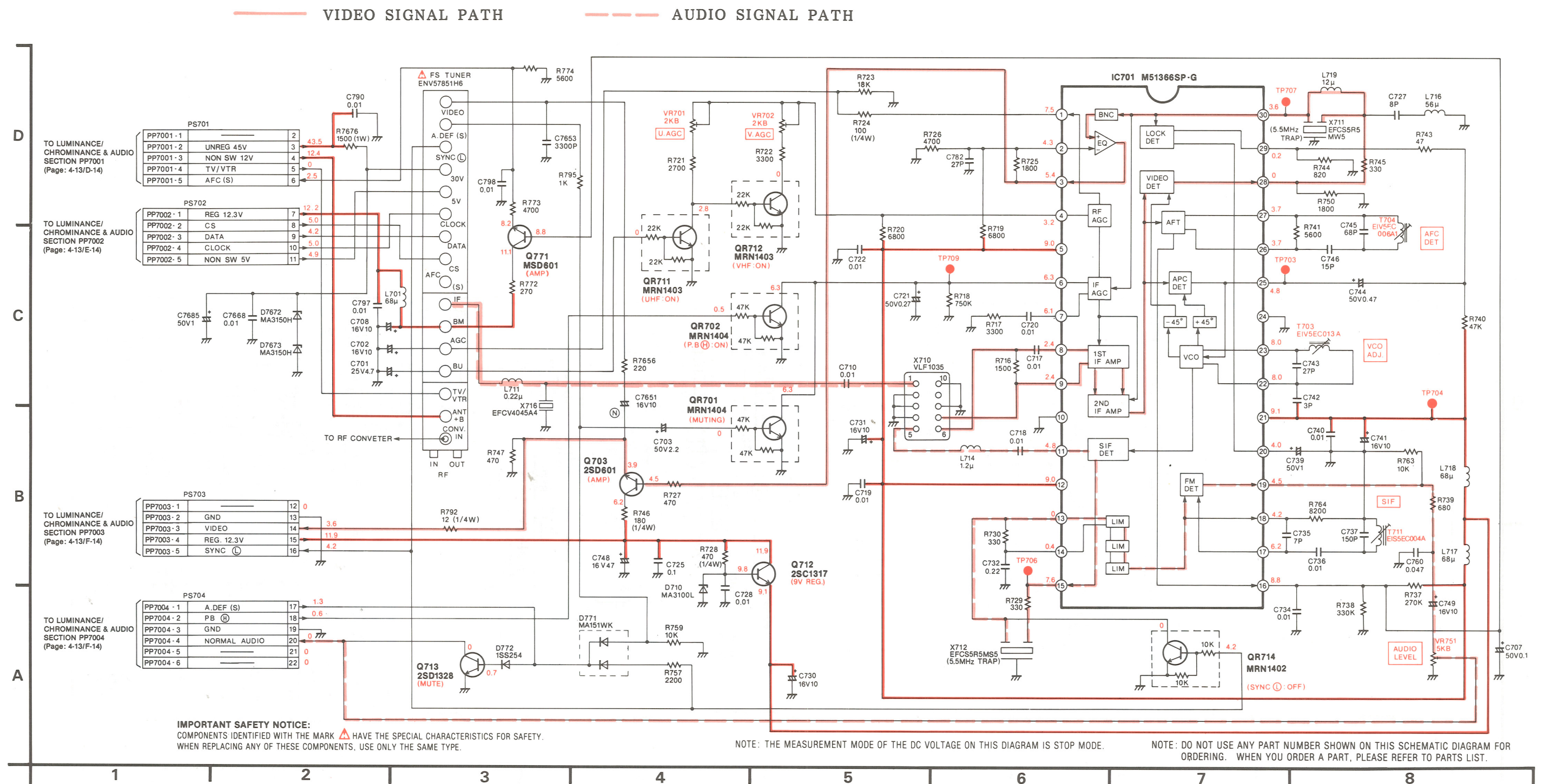


IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK Δ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

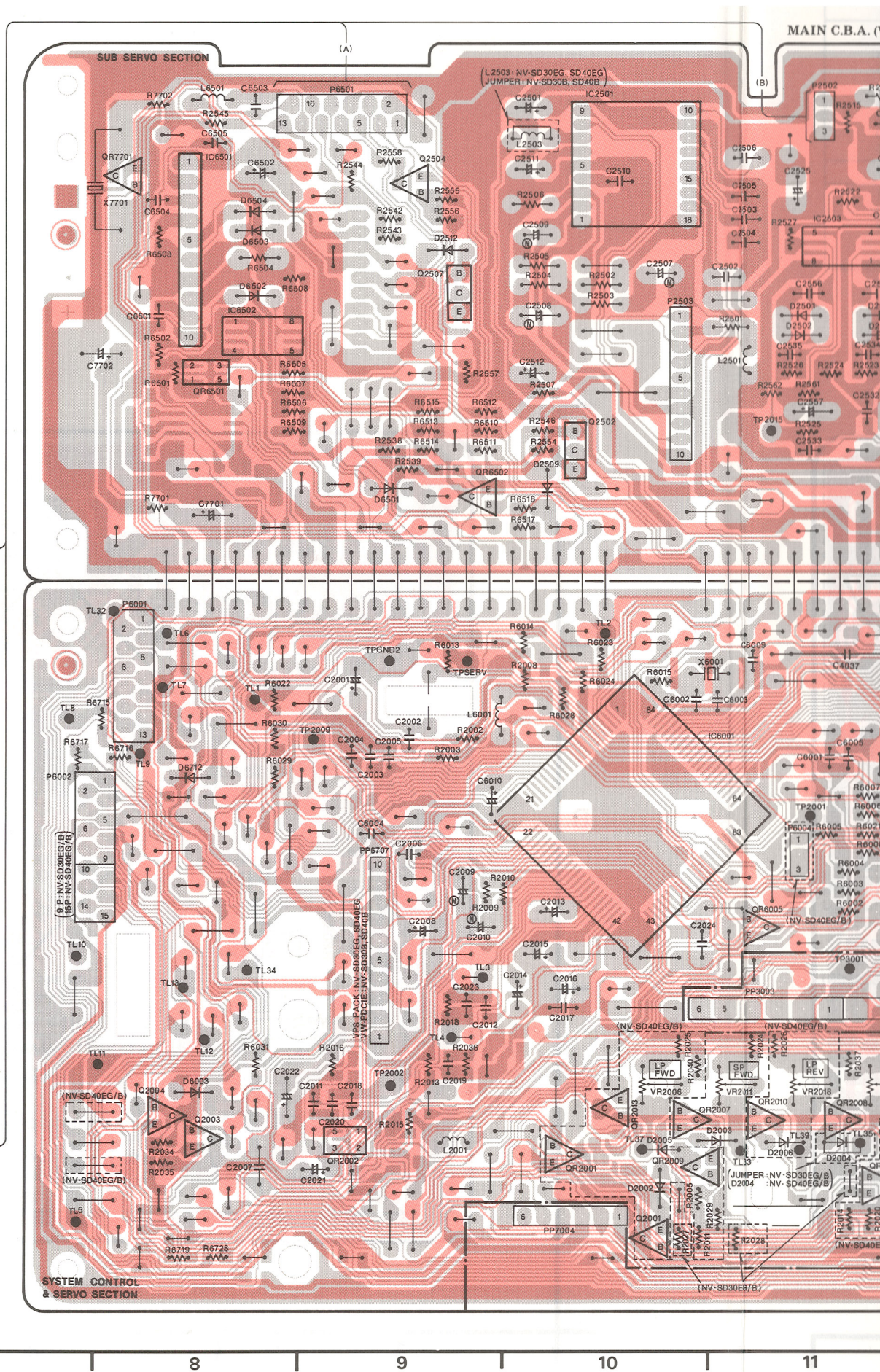
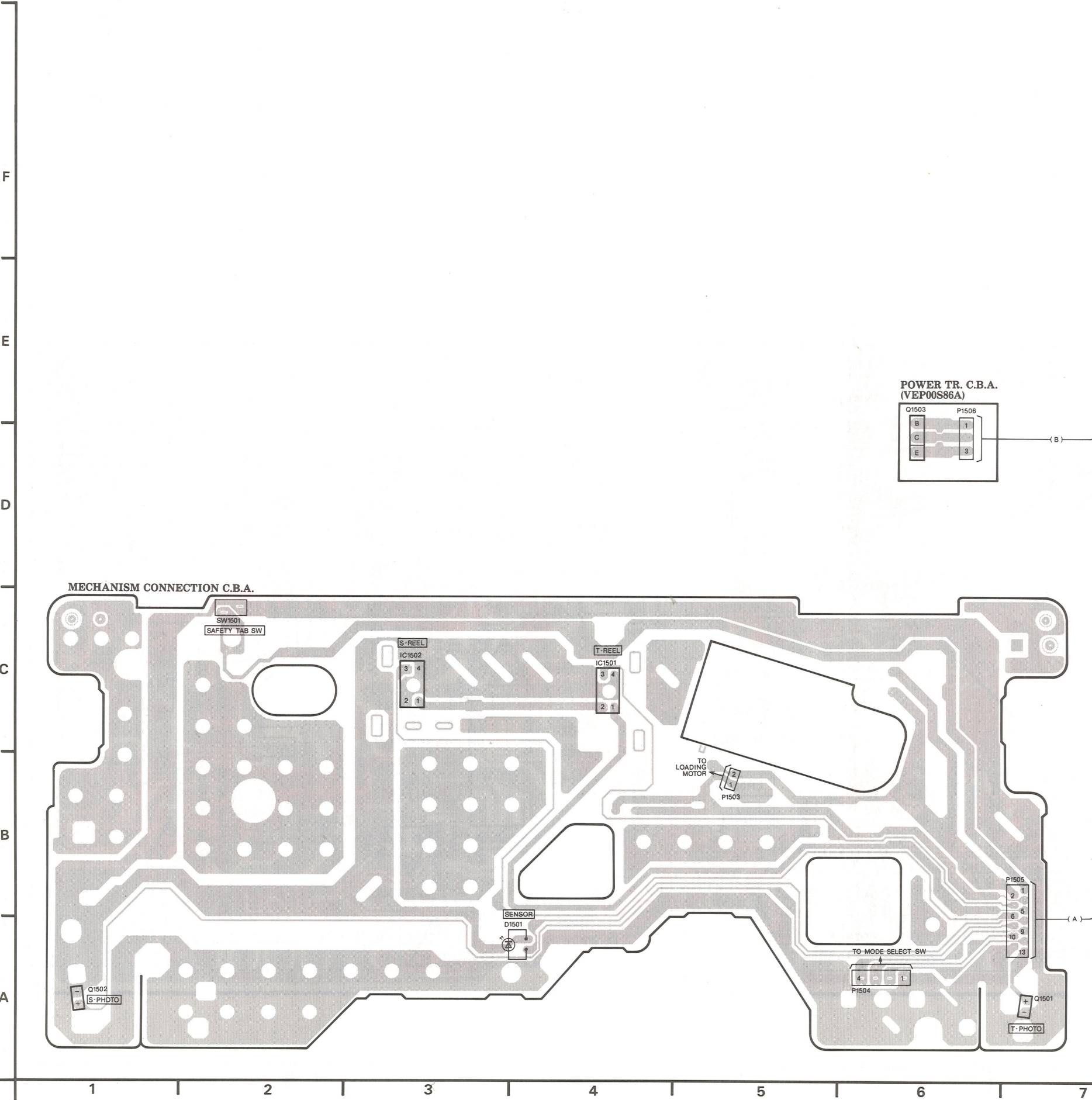
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

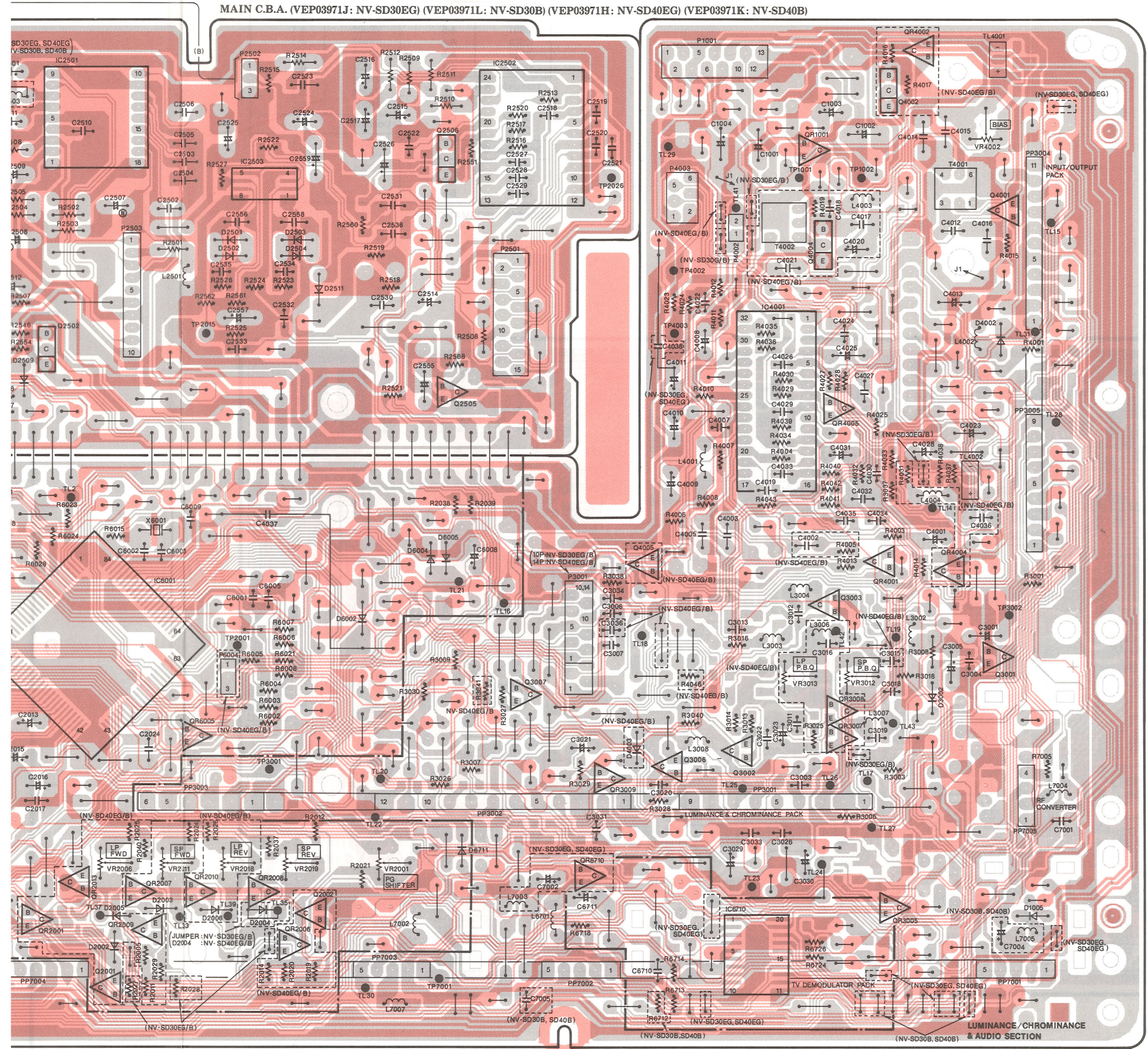
4-14. TV DEMODULATOR PACK SCHEMATIC DIAGRAM (NV-SD30EG, SD40EG)



ADDRESS INFORMATION



MAIN C.B.A. ADDRESS INFORMATION



SYSTEM CONTROL & SERVO Section	
Transistor	
Q2001	A-10
Q2002	A-12
Q2003	B-8
Q2004	B-8
Transistor & Resistor	
QR2001	A-10
QR2002	A-9
QR2006	A-11
QR2007	B-10
QR2008	B-11
QR2009	A-10
QR2010	B-11
QR2013	B-10
QR6005	C-11
QR6710	B-13
Integrated Circuit	
IC6001	C-11
IC6710	A-14
Test Point	
TP2001	C-11
TP2002	B-9
TP2009	C-9
TPGND2	D-9
TPSERV	D-9
Adjustment	
VR2001	B-12
VR2005	B-10
VR2011	B-11
VR2018	B-11
VR2019	B-11
Connector	
P6001	D-8
P6002	C-7
P6004	C-11
PP6707	C-9

ADDRESS INFORMATION

SUB SERVO Section	
Transistor	
Q1501	A-7
Q1502	A-1
Q1503	D-6
Q2502	E-10
Q2504	F-9
Q2505	E-12
Q2506	F-12
Q2507	F-9
Transistor & Resistor	
QR6501	E-8
QR6502	E-9
QR7701	F-8
Integrated Circuit	
IC1501	C-4
IC1502	C-3
IC2501	F-10
IC2502	F-13
IC2503	F-11
IC6501	F-8
IC6502	E-8
Test Point	
TP2015	E-11
TP2026	F-13
Connector	
P1503	B-5
P1504	A-6
P1505	B-7
P1506	D-6
P2501	E-13
P2502	F-11
P2503	F-10
P6501	F-9

ADDRESS INFORMATION

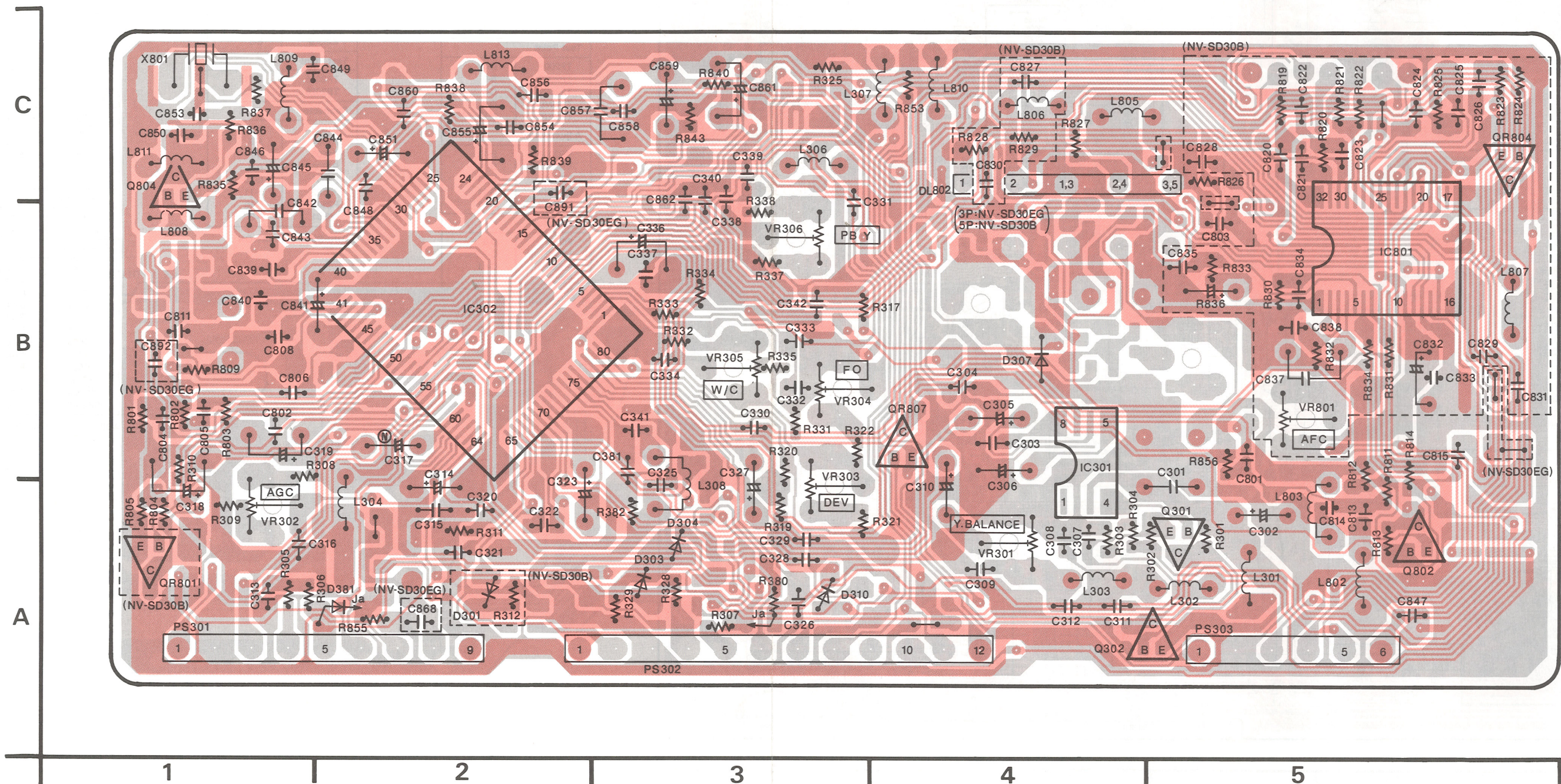
LUMINANCE/CHROMINANCE & AUDIO Section	
Transistor	
Q3001	C-16
Q3002	B-14
Q3003	C-15
Q3006	B-14
Q3007	C-13
Q4001	F-16
Q4002	F-15
Q4004	E-14
Q4005	D-13
Transistor & Resistor	
QR1001	F-14
QR3005	A-15
QR3007	C-15
QR3008	C-15
QR3009	B-13
QR4001	D-15
QR4002	F-15
QR4004	D-15
QR4005	D-15
Integrated Circuit	
IC4001	E-14
Test Point	
TP1001	F-14
TP1002	F-15
TP3002	C-16
TP4002	E-14
TP4003	E-14
TPGND1	F-14
Adjustment	
VR3012	C-15
VR3013	C-14
Connector	
P1001	F-14
P3001	C-13
P4003	F-14
PP3001	B-14
PP3002	B-13
PP3004	F-16
PP3005	D-16
PP7001	A-16
PP7002	A-13
PP7003	A-12
PP7004	A-10
PP7005	B-16

ADDRESS INFORMATION

4-17. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03A01A1PE: NV-SD30EG) (VEP03A01BPE: NV-SD30B)

LUMINANCE & CHROMINANCE PACK C.B.A.					
Transistor			Adjustment		
Q301	A-5		VR301	A-4	
Q302	A-4		VR302	A-1	
Q802	A-5		VR303	A-3	
Q804	C-1		VR304	B-3	
Transistor & Resistor			VR305	B-3	
QR801	A-1		VR306	B-3	
QR804	C-5		VR801	B-5	
QR807	B-4		Connector		
Integrated Circuit			PS301	A-1	
IC301	B-4		PS302	A-3	
IC302	B-2		PS303	A-5	
IC801	B-5				

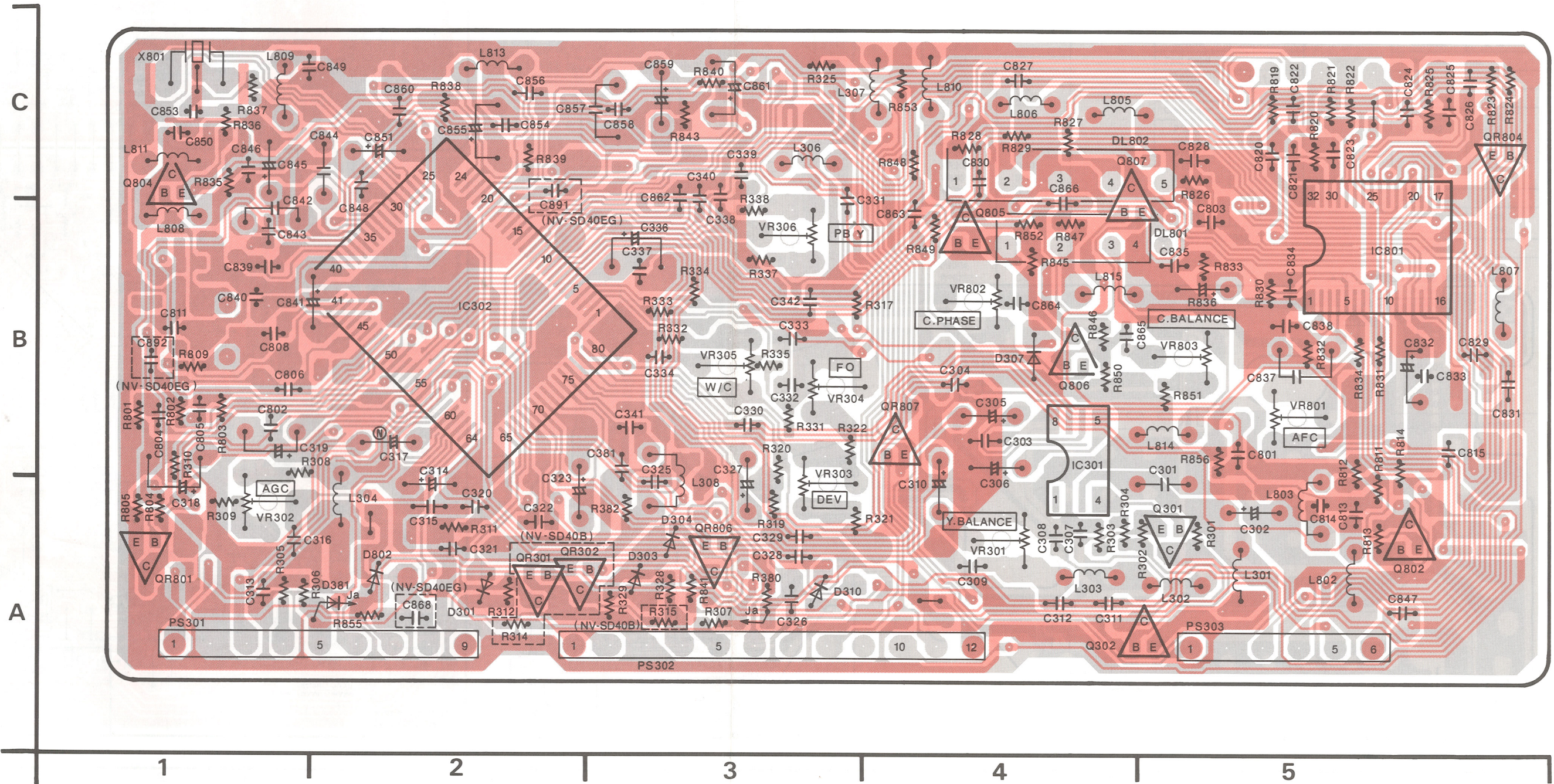
ADDRESS INFORMATION



4-18. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03A01DPE: NV-SD40EG) (VEP03A01EPE: NV-SD40B)

LUMINANCE & CHROMINANCE PACK C.B.A.					
Transistor			Adjustment		
Q301	A-5	VR301 VR302 VR303 VR304 VR305 VR306 VR801 VR802 VR803	A-4	A-1 A-3 B-3 B-3 B-5 B-4 B-5	
Q302	A-4				
Q802	A-5				
Q804	C-1				
Q805	B-4				
Q806	B-4				
Q807	C-4				
Transistor & Resistor					
QR301	A-2	PS301 PS302 PS303	A-1	A-3 A-5	
QR302	A-2				
QR801	A-1				
QR804	C-5				
QR806	A-3				
QR807	B-4				
Integrated Circuit					
IC301	B-4				
IC302	B-2				
IC801	B-5				

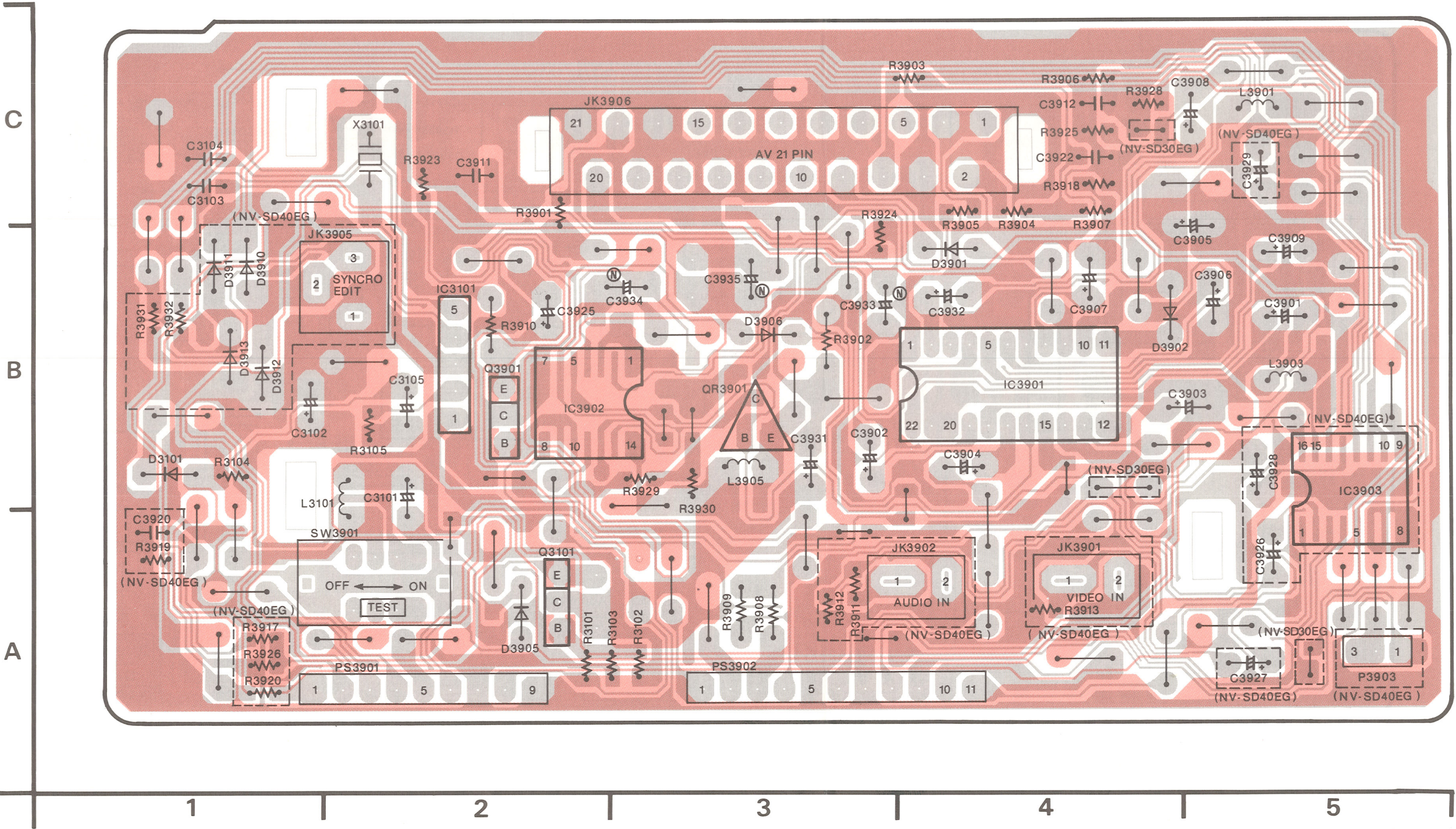
ADDRESS INFORMATION



4-19. INPUT/OUTPUT PACK C.B.A. (VEP03973B: NV-SD30EG) (VEP03973A: NV-SD40EG)

INPUT/OUTPUT PACK C.B.A.	
Transistor	
Q3101	A-2
Q3901	B-2
Transistor & Resistor	
QR3901	B-3
Integrated Circuit	
IC3101	B-2
IC3901	B-4
IC3902	B-2
IC3903	B-5
Connector	
P3903	A-5
PS3901	A-2
PS3902	A-3

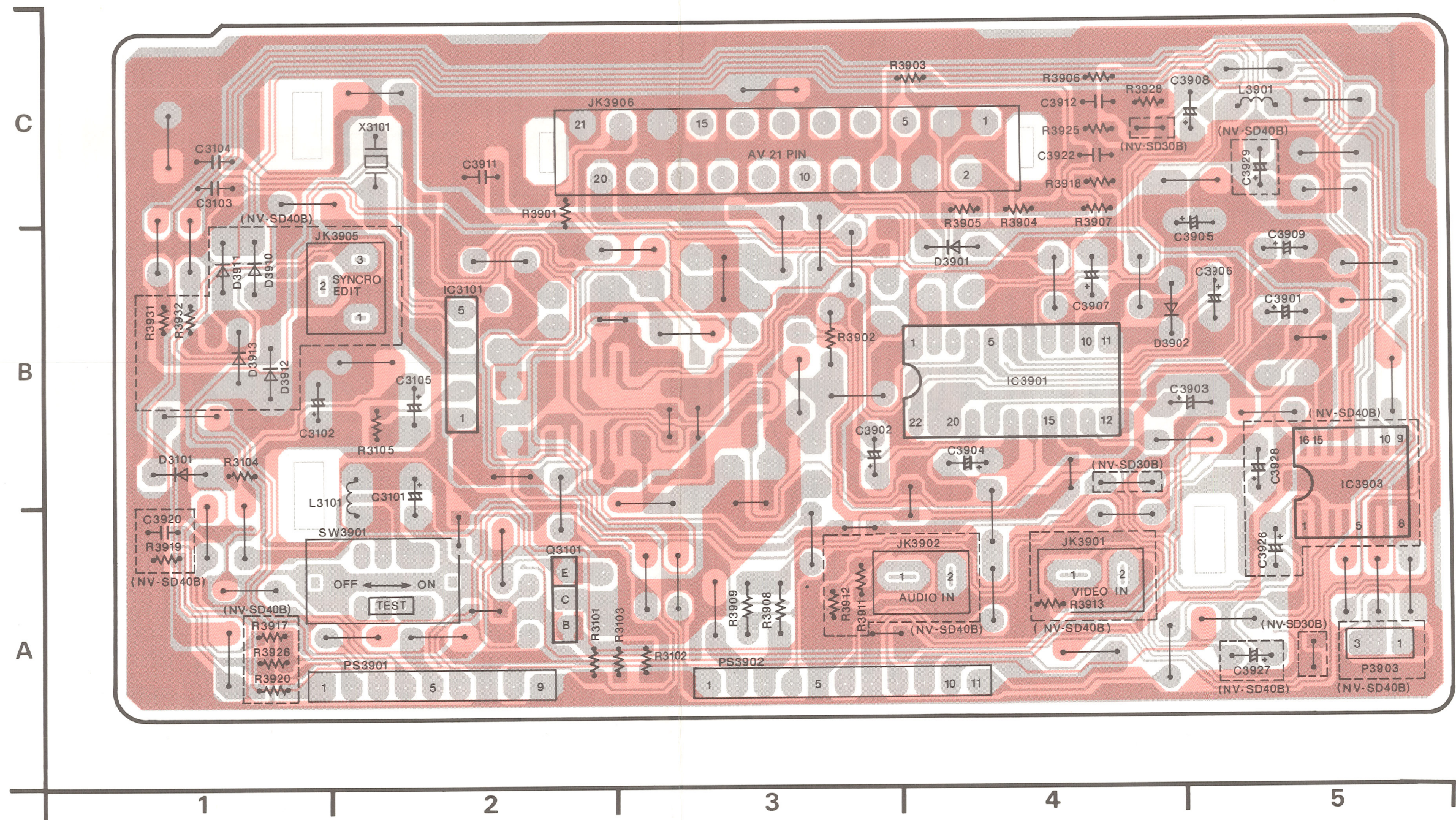
ADDRESS INFORMATION



4-20. INPUT/OUTPUT PACK C.B.A. (VEP03973D: NV-SD30B) (VEP03973C: NV-SD40B)

INPUT/OUTPUT PACK C.B.A.	
Transistor	
Q3101	A-2
Integrated Circuit	
IC3101	B-2
IC3901	B-4
IC3903	B-5
Connector	
P3903	A-5
PS3901	A-2
PS3902	A-3

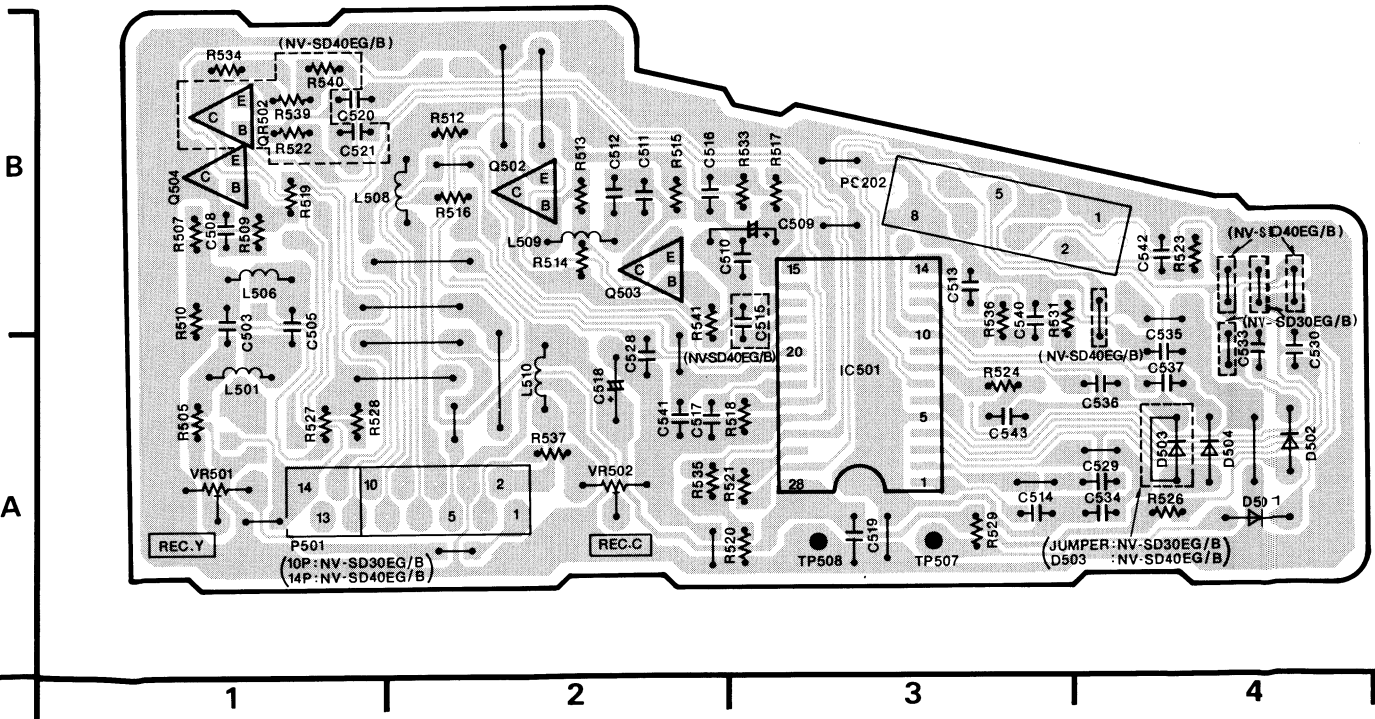
ADDRESS INFORMATION



4-21. HEAD AMP C.B.A. (VEP05182APE: NV-SD30EG/B)
(VEP05182BPE: NV-SD40EG/B)

HEAD AMP C.B.A.	
Transistor	
Q502	B-2
Q503	B-2
Q504	B-1
Transistor & Resistor	
QR502	B-1
Integrated Circuit	
IC501	A-3
Test Point	
TP507	A-3
TP508	A-3
Adjustment	
VR501	A-1
VR502	A-2
Connector	
P501	A-1
PS202	B-3

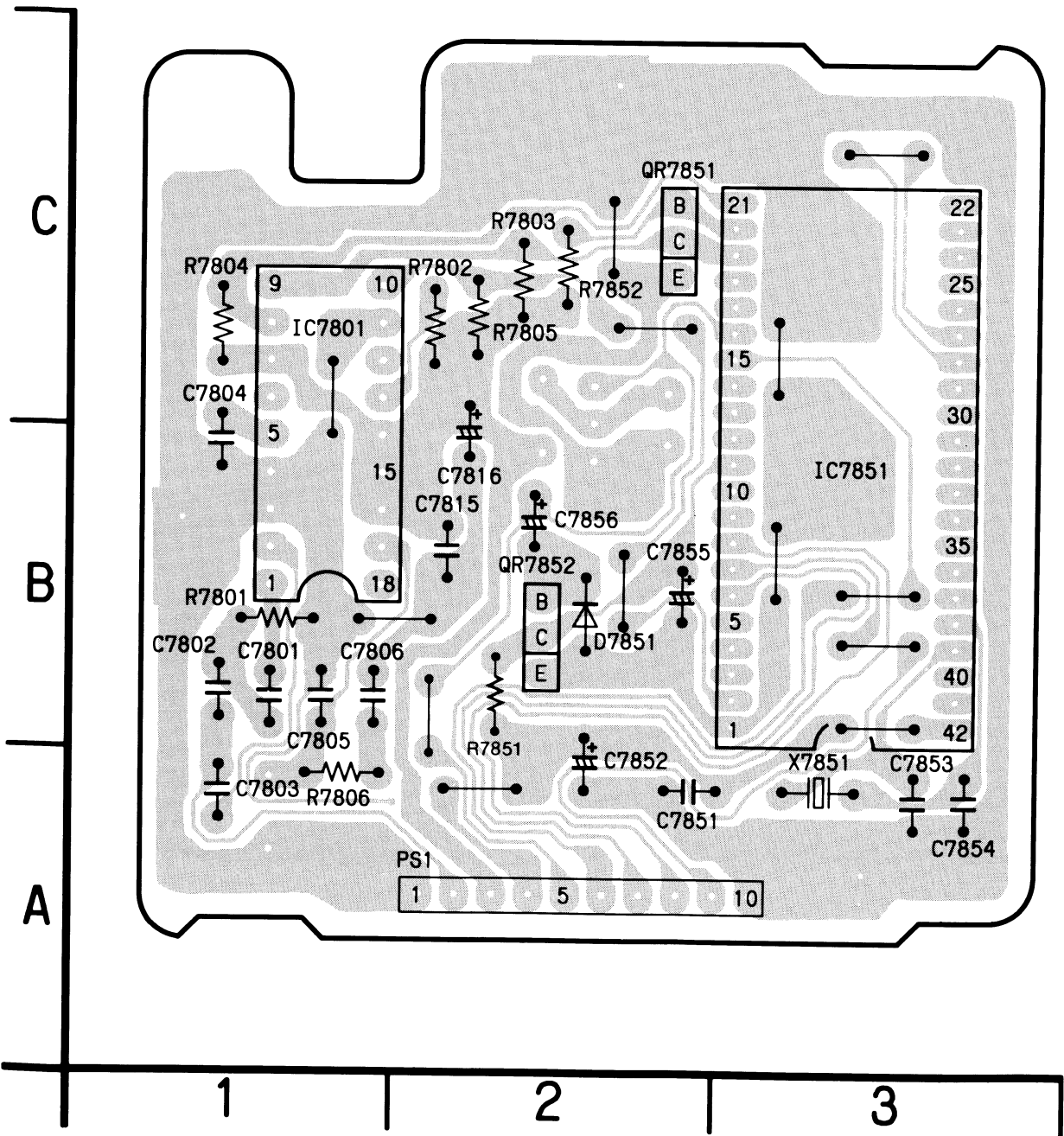
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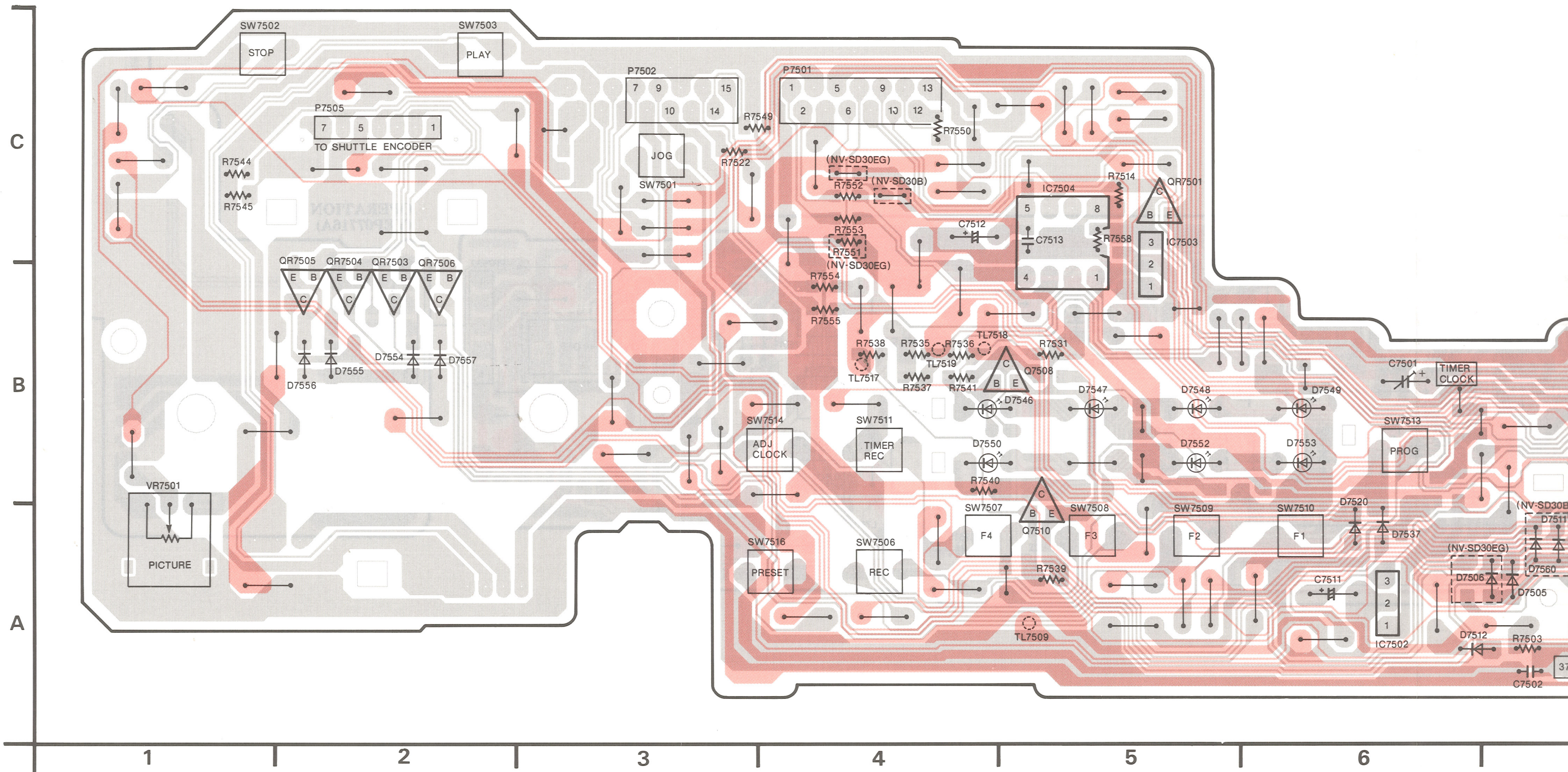


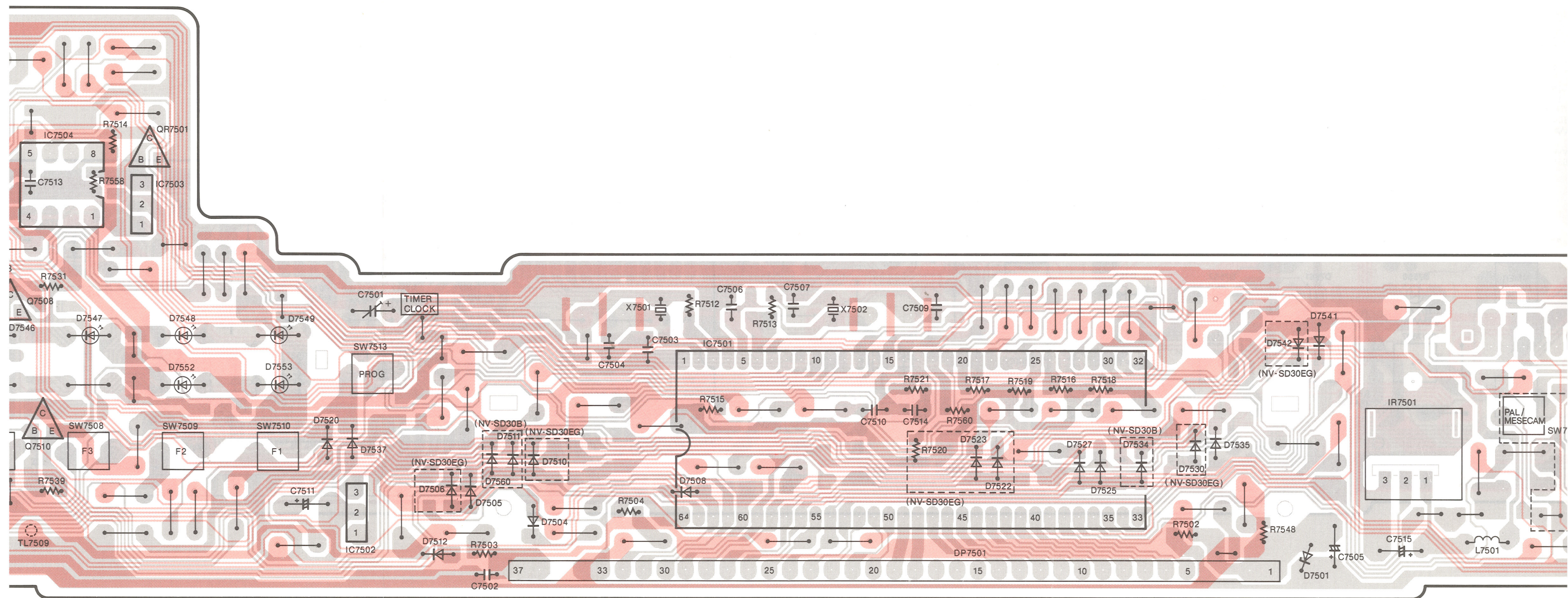
4-22. VPS PACK C.B.A. (VEP07538G: NV-SD30EG, SD40EG)

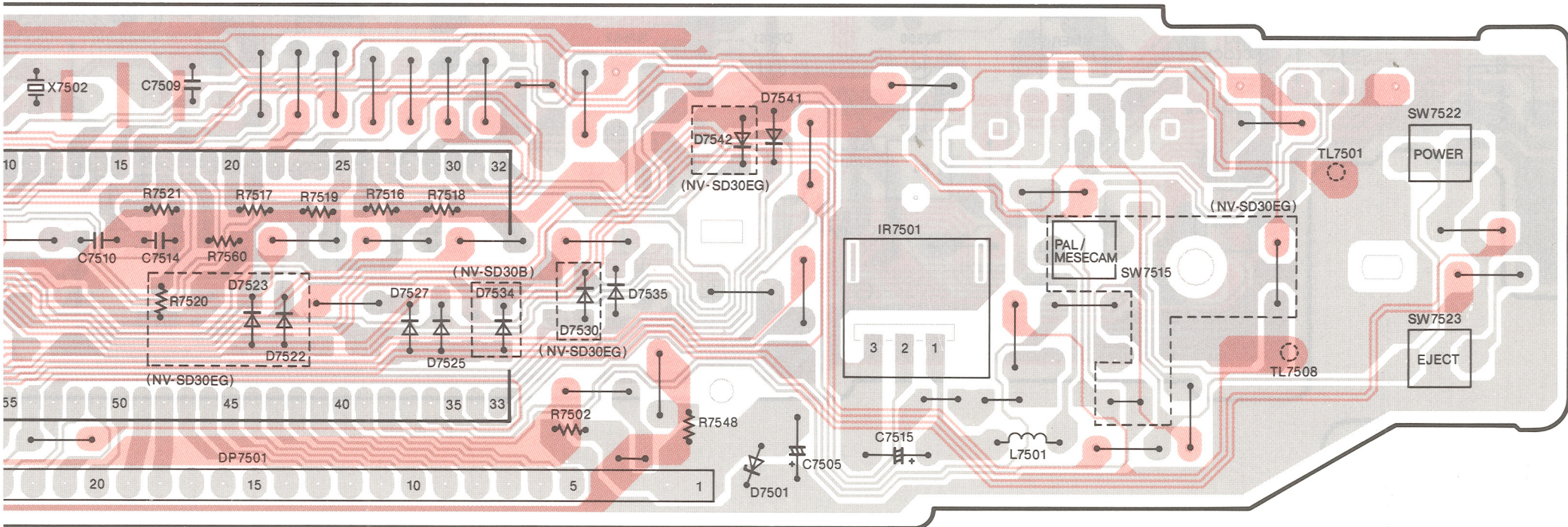
VPS PACK C.B.A.	
Transistor & Resistor	
QR7851	C-2
QR7852	B-2
Integrated Circuit	
IC7801	C-1
IC7851	B-3
Connector	
PS1	A-2

ADDRESS INFORMATION









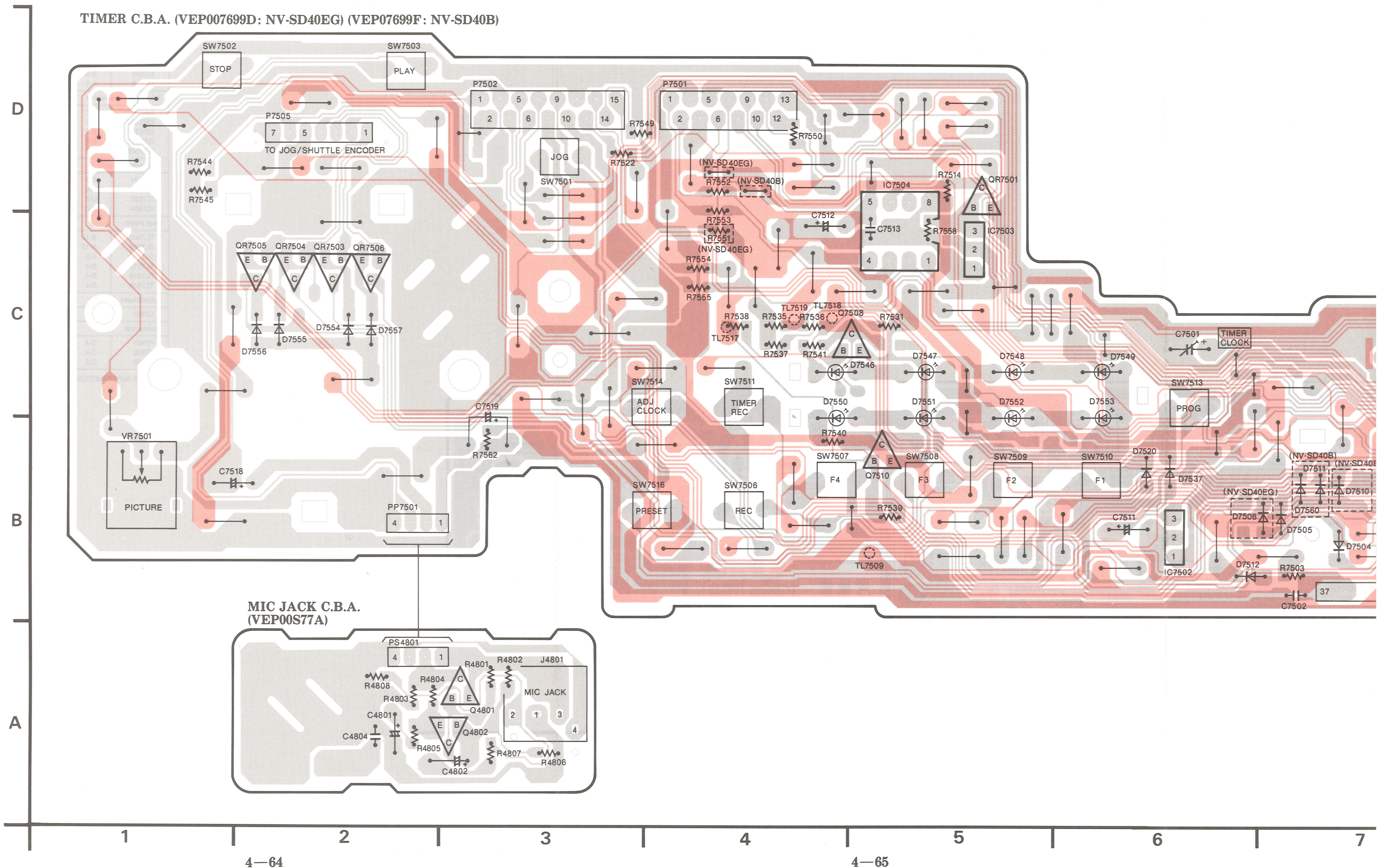
TIMER C.B.A.	
Transistor	
Q7508	B-5
Q7510	A-5
Transistor & Resistor	
QR7501	C-5
QR7503	B-2
QR7504	B-2
QR7505	B-2
QR7506	B-2
Integrated Circuit	
IC7501	B-8
IC7502	A-6
IC7503	C-5
IC7504	C-5
Test Point	
TL7501	B-12
TL7508	A-12
TL7509	A-5
TL7517	B-4
TL7518	B-4
TL7519	B-4
Adjustment	
C7501	B-6
Connector	
P7501	C-4
P7502	C-3
P7505	C-2

ADDRESS INFORMATION

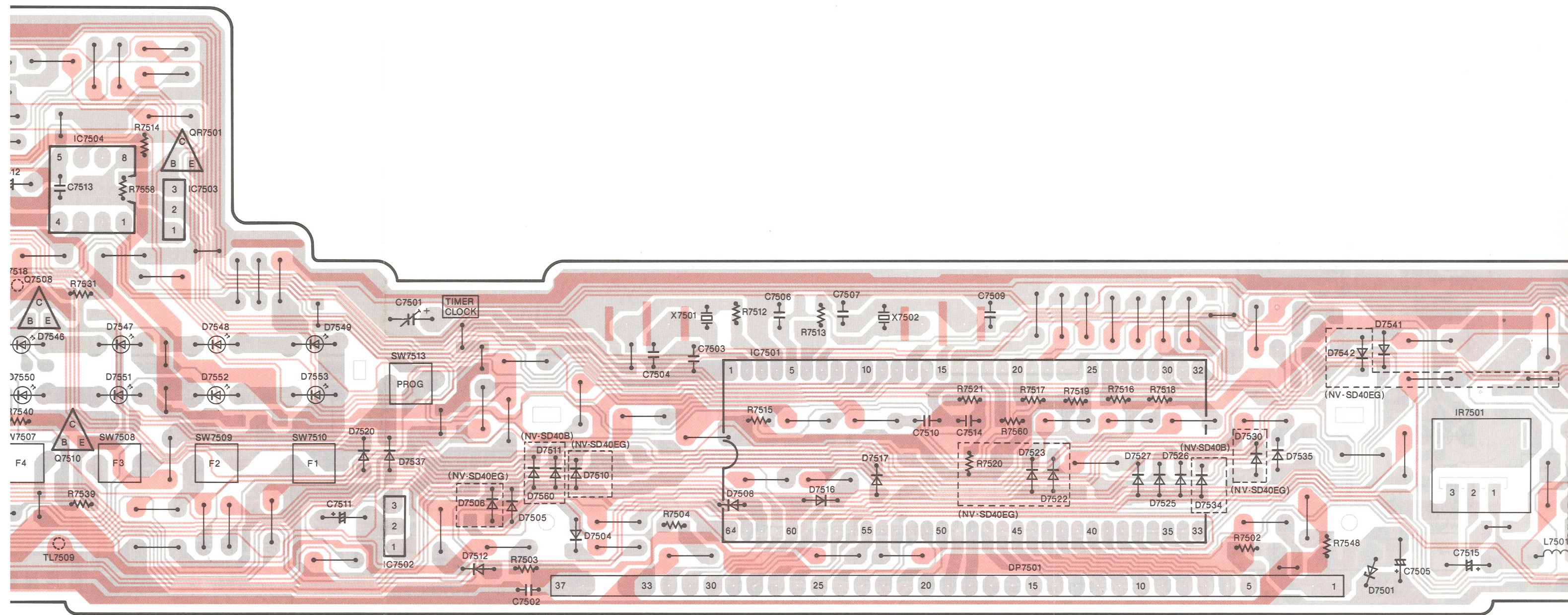


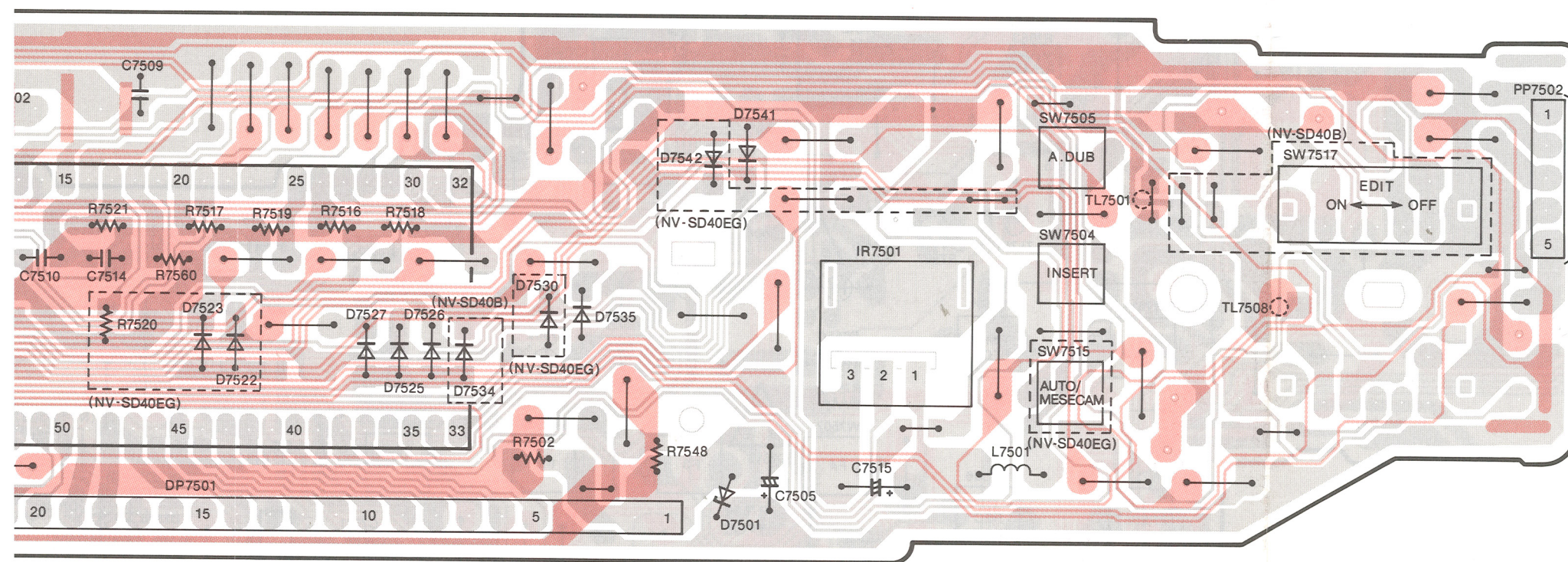
4-24. TIMER C.B.A. (VEP07699D: NV-SD40EG) (VEP07699F: NV-SD40B) & OPERATION C.B.A. (VEP07716A: NV-SD40EG/B)

TIMER C.B.A. (VEP007699D: NV-SD40EG) (VEP07699F: NV-SD40B)

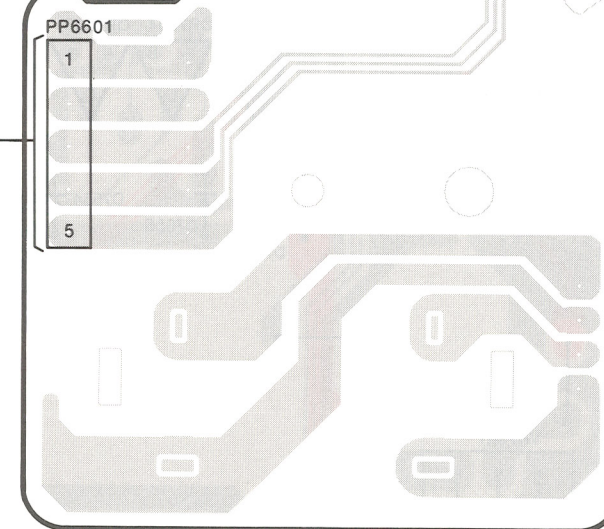


07716A: NV-SD40EG/B)





OPERATION C.B.A. (VEP07716A)



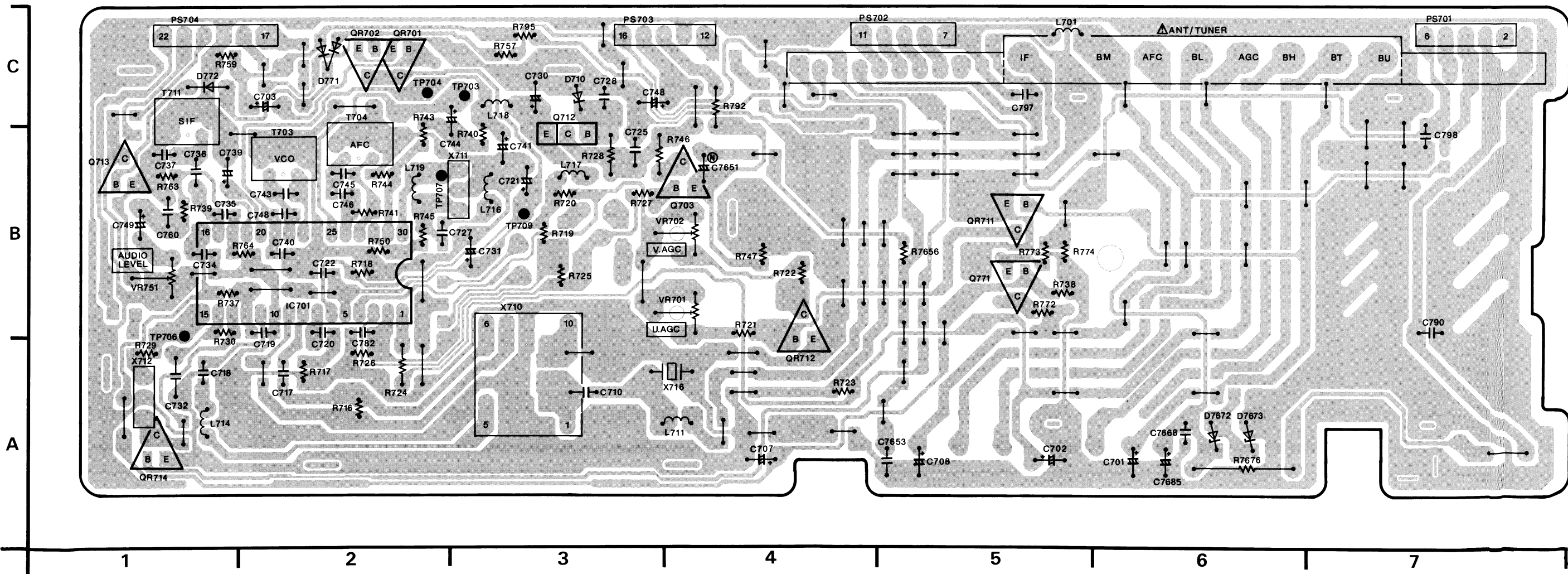
TIMER C.B.A.	
Transistor	
Q4801	A-3
Q4802	A-3
Q7508	C-5
Q7510	B-5
Transistor & Resistor	
QR7501	D-5
QR7503	C-2
QR7504	C-2
QR7505	C-2
QR7506	C-2
Integrated Circuit	
IC7501	C-8
IC7502	B-6
IC7503	C-5
IC7504	D-5
Test Point	
TL7501	C-12
TL7508	B-12
TL7509	B-5
TL7517	C-4
TL7518	C-4
TL7519	C-4
Adjustment	
C7501	C-6
Connector	
P7501	D-4
P7502	D-3
P7505	D-2
PP6601	C-13
PP7501	B-2
PP7502	C-13
PS4801	A-2

ADDRESS INFORMATION

4-25. TV DEMODULATOR PACK C.B.A. (VEP07726A: NV-SD30EG, SD40EG)

TV DEMODULATOR PACK C.B.A.			
Transistor		TP706	B-1
Q703	B-4	TP707	B-2
Q712	B-3	TP709	B-3
Q713	B-1	Adjustment	
Q771	B-5	T703	B-2
Transistor & Resistor		T704	B-2
QR701	C-2	T711	C-1
QR702	C-2	VR701	B-4
QR711	B-5	VR702	B-4
QR712	A-4	VR751	B-1
QR714	A-1	Connector	
Integrated Circuit		PS701	C-7
IC701	B-2	PS702	C-4
Test Point		PS703	C-3
TP703	C-3	PS704	C-1
TP704	C-2		

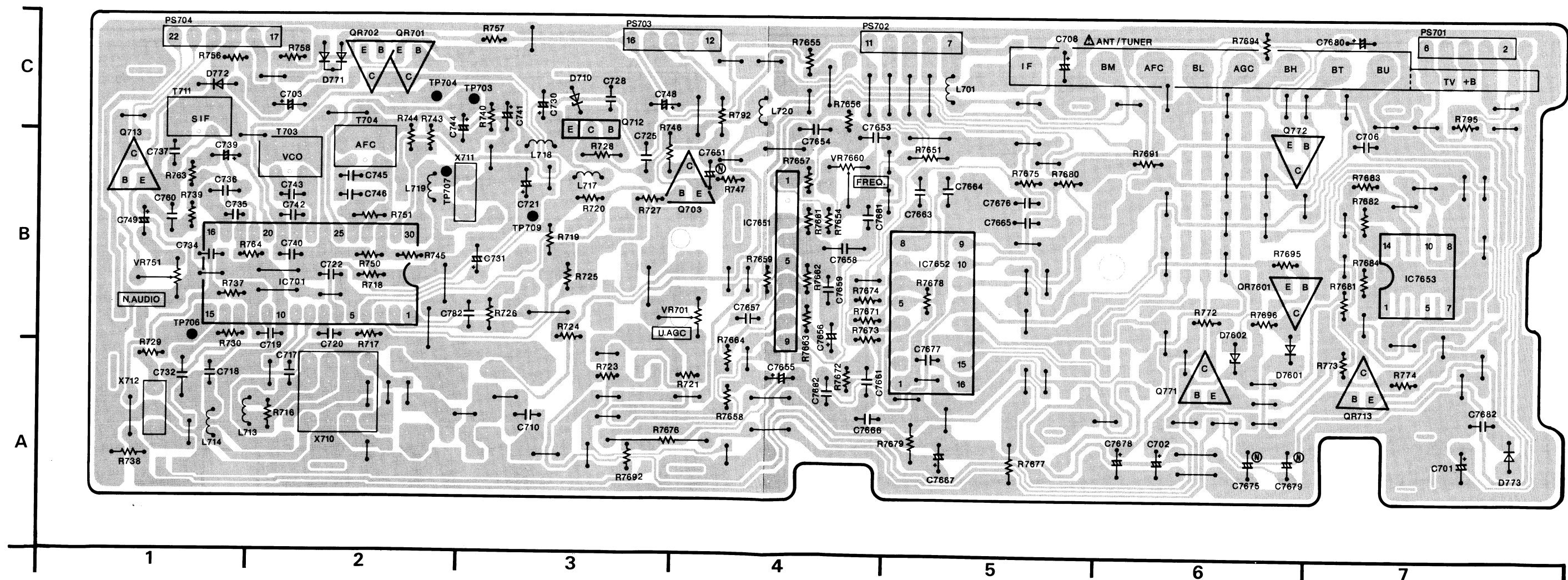
ADDRESS INFORMATION



4-26. TV DEMODULATOR PACK C.B.A. (VEP07645S: NV-SD30B, SD40B)

TV DEMODULATOR PACK C.B.A.			
Transistor		Test Point	
Q703	B-4	TP703	C-3
Q712	C-3	TP704	C-2
Q713	B-1	TP706	B-1
Q771	A-6	TP707	B-2
Q772	C-6	TP709	B-3
Transistor & Resistor		Adjustment	
QR701	C-2	T703	B-2
QR702	C-2	T704	B-2
QR713	A-7	T711	C-1
QR7601	B-6	VR701	B-4
Integrated Circuit		VR751	B-1
		VR7660	B-4
IC701	B-2	Connector	
IC7651	B-4		
IC7652	B-5		
IC7653	B-7		
		PS701	C-7
		PS702	C-5
		PS703	C-3
		PS704	C-1

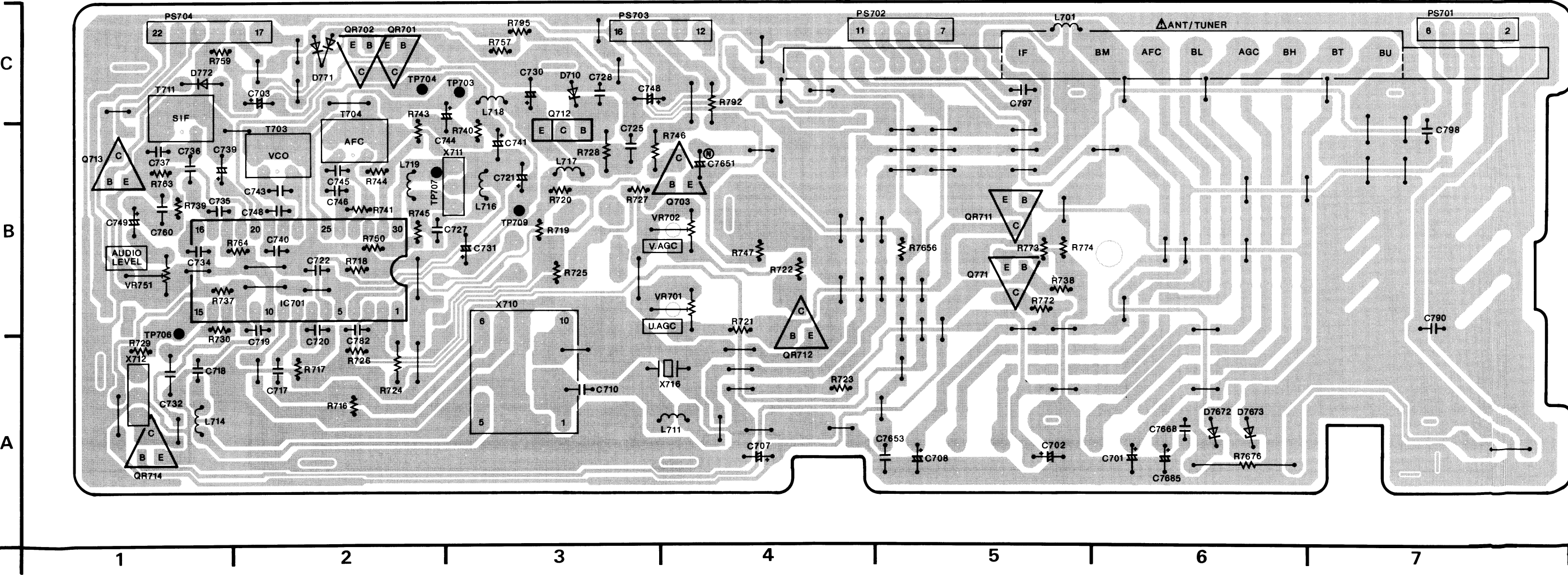
ADDRESS INFORMATION



4-25. TV DEMODULATOR PACK C.B.A. (VEP07726A: NV-SD30EG, SD40EG)

TV DEMODULATOR PACK C.B.A.				
Transistor		TP706	B-1	
Q703	B-4	TP707	B-2	
Q712	B-3	TP709	B-3	
Q713	B-1	Adjustment		
Q771	B-5	T703	B-2	
Transistor & Resistor		T704	B-2	
QR701	C-2	T711	C-1	
QR702	C-2	VR701	B-4	
QR711	B-5	VR702	B-4	
QR712	A-4	VR751	B-1	
QR714	A-1	Connector		
Integrated Circuit		PS701	C-7	
IC701	B-2	PS702	C-4	
Test Point		PS703	C-3	
TP703	C-3	PS704	C-1	
TP704	C-2			

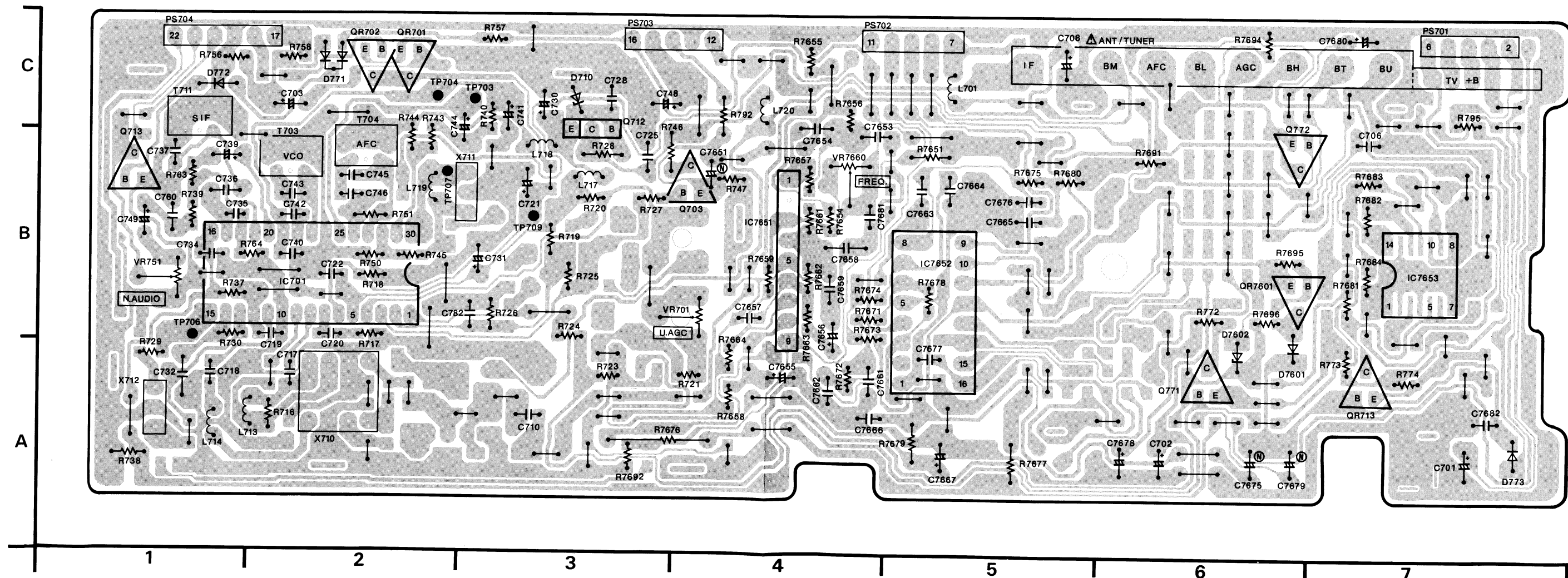
ADDRESS INFORMATION



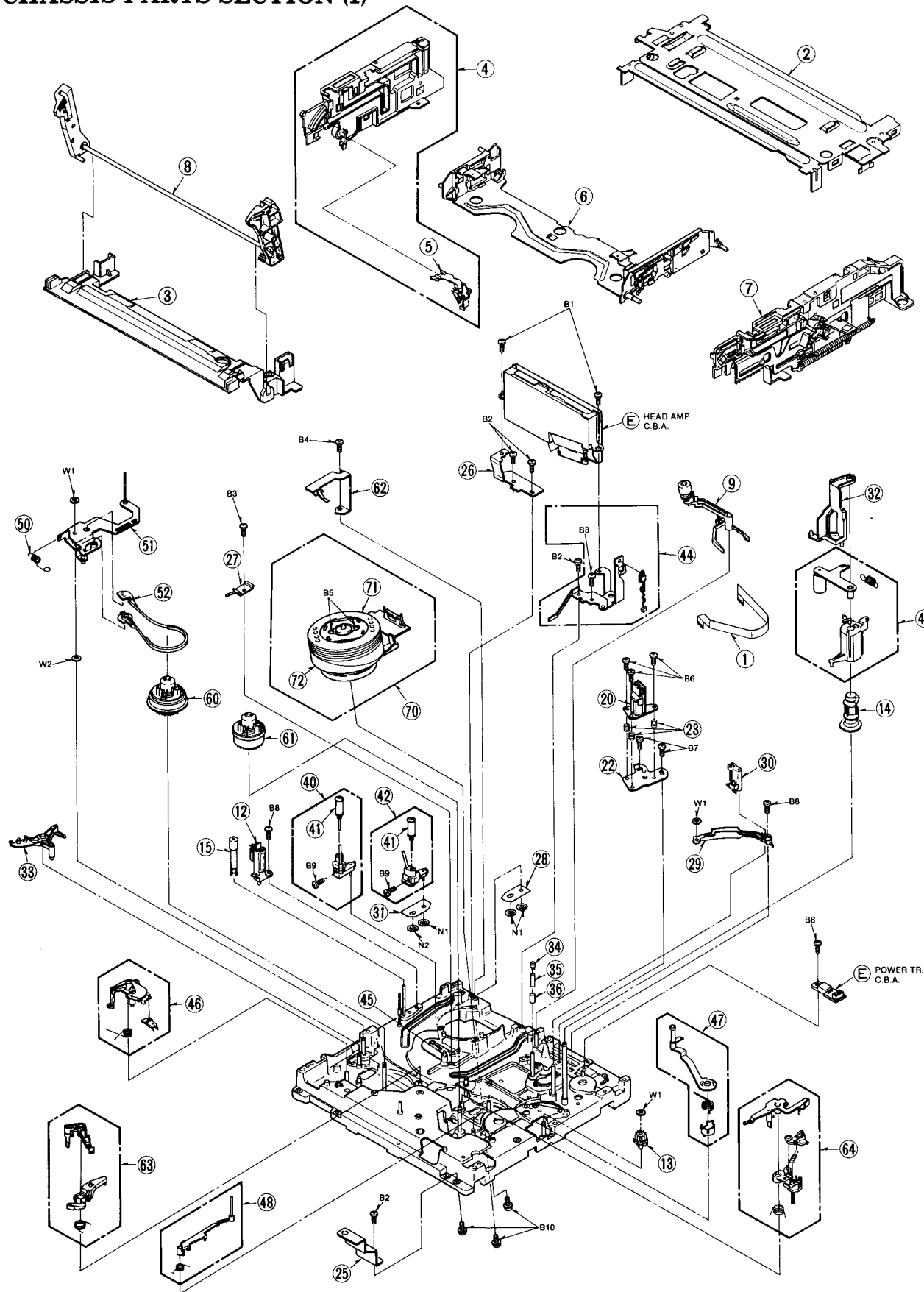
4-26. TV DEMODULATOR PACK C.B.A. (VEP07645S: NV-SD30B, SD40B)

TV DEMODULATOR PACK C.B.A.			
Transistor		Test Point	
Q703	B-4	TP703	C-3
Q712	C-3	TP704	C-2
Q713	B-1	TP706	B-1
Q771	A-6	TP707	B-2
Q772	C-6	TP709	B-3
Transistor & Resistor		Adjustment	
QR701	C-2	T703	B-2
QR702	C-2	T704	B-2
QR713	A-7	T711	C-1
QR7601	B-6	VR701	B-4
Integrated Circuit		VR751	B-1
		VR7660	B-4
IC701	B-2	Connector	
IC7651	B-4	PS701	C-7
IC7652	B-5	PS702	C-5
IC7653	B-7	PS703	C-3
		PS704	C-1

ADDRESS INFORMATION



SECTION 5
EXPLODED VIEWS & PARTS LIST
5-1. EXPLODED VIEW & MECHANICAL REPLACEMENT PARTS LIST
① CHASSIS PARTS SECTION (1)

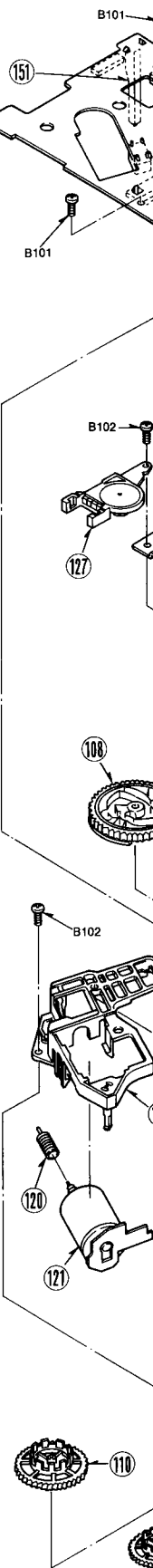


Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1(1)	VMJ0653	FLEXIBLE CABLE (6F)	1	P4003-P1501
2(1)	VMA8644	TOP PLATE	1	
3(1)	VMA8787	CASSETTE GUIDE	1	
4(1)	VXA4660	SIDE PLATE (L) UNIT	1	
5(1)	VXL2250	OPENER LEVER UNIT	1	
6(1)	VXA4661	CASSETTE HOLDER PLATE UNIT	1	
7(1)	VXA4806	SIDE PLATE (R) UNIT	1	
8(1)	VXP1339	MAIN SHAFT UNIT	1	
9(1)	VXL2251	CLEANER ARM UNIT	1	
12(1)	VBS0050	FE HEAD	1	
13(1)	VDG0871	CARRIAGE CONNECTION GEAR	1	
14(1)	VDG0886	PINCH CAM GEAR	1	
15(1)	VXP1402	IMPEDANCE ROLLER UNIT	1	
20(1)	VED0205	A/C HEAD (1) UNIT	1	
22(1)	VMA8624	A/C HEAD BASE	1	
23(1)	VMB2515	A/C HEAD SPRING	3	
25(1)	VMA8761	MOUNT ANGLE	1	
26(1)	VMA8763	HEAD AMP MOUNT ANGLE (L)	1	
27(1)	VMO0917	EARTH SPRING	1	
28(1)	VMA8874	INCLIND BASE HOLDER (S)	1	
29(1)	VMD2078	P5 STOPPER BASE	1	
30(1)	VXA4927	P5 POST STOPPER	1	
31(1)	VMA8873	INCLIND BASE HOLDER (T)	1	
32(1)	VMD2101	OPENER PIECE	1	
33(1)	VML2776	TENSION SPRING ARM	1	
34(1)	VMX1544	P4 UPPER LIMITER	1	
35(1)	VMX2175	P4 SLEEVE	1	
36(1)	VMX2176	P4 LOWER LIMITER	1	
40(1)	VXA4982	INCLIND BASE (S) UNIT	1	
41(1)	VXP1415	ROLLER POST UNIT	2	
42(1)	VXA4984	INCLIND BASE (T) UNIT	1	
44(1)	VXA4974	HEAD AMP MOUNT ANGLE (R) U.	1	
45(1)	VMS5383	CASSETTE POSITION FIXTURE	1	
46(1)	VXL2310	REVIEW ARM UNIT	1	
47(1)	VXL2306	P5 ARM UNIT	1	
48(1)	VXL2243	TAKE UP TENSION REGULATOR ARM UNIT	1	
49(1)	VXL2246	PINCH ARM UNIT	1	
50(1)	VMB2434	TENSION SPRING	1	
51(1)	VXL2309	TENSION ARM (1) UNIT	1	
52(1)	VX20310	TENSION BAND UNIT	1	
60(1)	VXR0221	SUPPLY REEL TABLE UNIT	1	
61(1)	VXR0222	TAKE UP REEL TABLE UNIT	1	
62(1)	VXS0114	EARTH PLATE	1	
63(1)	VX20312	SUPPLY BRAKE ARM UNIT	1	
64(1)	VX20313	TAKE UP BRAKE ARM UNIT	1	
70(1)	VEG1023	CYLINDER UNIT	1	NV-SD40EG/B
70(1)	VEG1024	CYLINDER UNIT	1	NV-SD30EG/B
71(1)	VEH0598	UPPER CYLINDER UNIT	1	NV-SD40EG/B
71(1)	VEH0599	UPPER CYLINDER UNIT	1	NV-SD30EG/B
72(1)	VJRO082	RT TERMINAL	1	
B1(1)	VHD0773	SCREW	2	
B2(1)	XTV26+6F	SCREW	4	
B3(1)	XTV26+4F	SCREW	2	
B4(1)	XTN3+6FFZ	SCREW	1	
B5(1)	VHD0425	SCREW	2	
B6(1)	VHD0762	SCREW	3	
B7(1)	XTV26+6FZ	SCREW	2	
B8(1)	XTV26+8F	SCREW	3	
B9(1)	VHD0760	SCREW	2	
B10(1)	VHD0342	SCREW	3	
N1(1)	VHN0192	NUT	3	
N2(1)	VHN0193	NUT	1	
W1(1)	VMX2208	WASHER	3	
W2(1)	XWGV26D5G	WASHER	1	

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
100(2)	VEK5927	STATOR UNIT	1	
101(2)	VBK0061	FG HEAD	1	
103(2)	VMA8765	ROTOR STOPPER	1	
104(2)	VMX1927	OIL SEAL	2	
105(2)	VXD0140	HOUSING UNIT	1	
106(2)	VXP1350	ROTOR UNIT	1	
107(2)	VXQ0297	THRUST SCREW UNIT	1	
108(2)	VDG0913	MAIN CAM GEAR	1	
109(2)	VDG0861	SUPPLY REEL GEAR	1	
110(2)	VDG0862	TAKE UP REEL GEAR	1	
111(2)	VDG0868	WORM WHEEL GEAR	1	
112(2)	VDG0885	SUB CAM GEAR	1	
113(2)	VDV0235	TIMING BELT	1	
120(2)	VDG0866	WORM GEAR	1	
121(2)	VEM0427	LOADING MOTOR (1) UNIT	1	
123(2)	VMD1942	MOTOR BRACKET	1	
126(2)	VML2725	IDLER CONTROL LEVER	1	
127(2)	VSS0365	MODE SW	1	
128(2)	VXA4797	SS BRAKE BASE UNIT	1	
129(2)	VXA4799	TENSION ROLLER UNIT	1	
140(2)	VXL2229	IDLER ARM UNIT	1	
141(2)	VXL2230	DIRECT LEVER UNIT	1	
142(2)	VXL2299	SUPPLY LOADING ARM UNIT	1	
143(2)	VXL2300	TAKE UP LOADING ARM UNIT	1	
144(2)	VXL2307	MAIN LEVER UNIT	1	
145(2)	VXP1409	CENTRE CLUTCH	1	
150(2)	VMD1926	LED HOLDER	1	
151(2)	VMD1927	PHOTO TRANSISTOR HOLDER	2	
152(2)	VES0695	SAFETY TAB SW	1	
153(2)	VJBO0563	MECHANISM CONNECTION C.B.	1	ELECTRICAL PARTS ON THE C.B.A. IS LISTED ON ELECTRICAL PARTS LIST.
154(2)	VMD2029	REEL SHAFT GUIDE	1	
B101	VHD0772	SCREW	4	
B102	XTV26+8F	SCREW	2	
B103	XTV26+6F	SCREW	3	
B104	VHD0753	SCREW	3	
B105	VHD0754	SCREW	1	
B106	XSB26+4FZ	SCREW	1	
W101	VMX2208	WASHER	3	



PARTS LIST

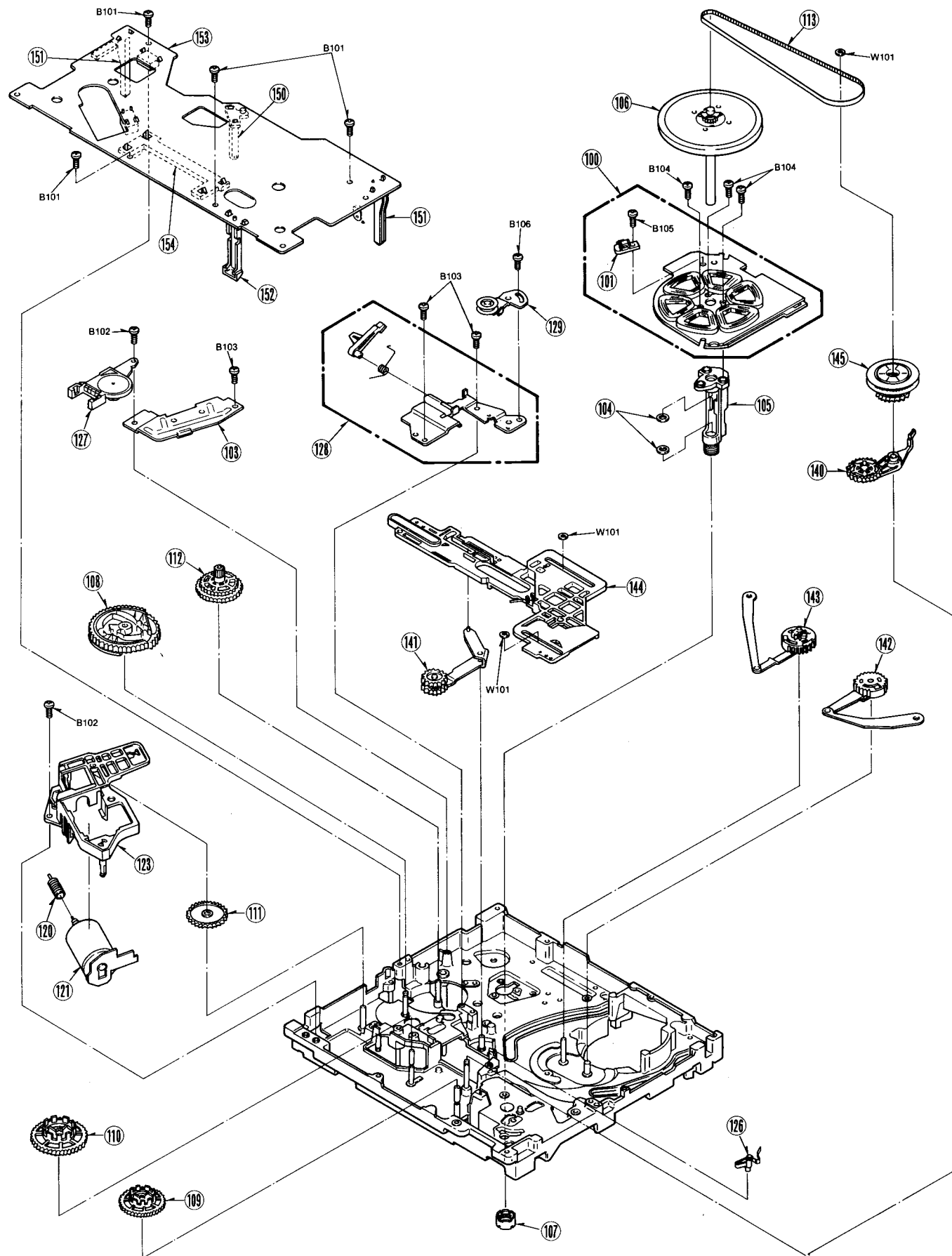
Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1(1)	VWJ0653	FLEXIBLE CABLE (6P)	1	P4003-P1501
2(1)	VMA8644	TOP PLATE	1	
3(1)	VMA8787	CASSETTE GUIDE	1	
4(1)	VXA4660	SIDE PLATE (L) UNIT	1	
5(1)	VXL2250	OPENER LEVER UNIT	1	
6(1)	VXA4661	CASSETTE HOLDER PLATE UNIT	1	
7(1)	VXA4806	SIDE PLATE (R) UNIT	1	
8(1)	VXP1339	MAIN SHAFT UNIT	1	
9(1)	VXL2251	CLEANER ARM UNIT	1	
12(1)	VBS0050	FE HEAD	1	
13(1)	VDG0871	CARRIAGE CONNECTION GEAR	1	
14(1)	VDG0886	PINCH CAM GEAR	1	
15(1)	VXP1402	IMPEDANCE ROLLER UNIT	1	
20(1)	VED0205	A/C HEAD (1) UNIT	1	
22(1)	VMA8624	A/C HEAD BASE	1	
23(1)	VMB2515	A/C HEAD SPRING	3	
25(1)	VMA8761	MOUNT ANGLE	1	
26(1)	VMA8763	HEAD AMP MOUNT ANGLE (L)	1	
27(1)	VMO0917	EARTH SPRING	1	
28(1)	VMA8874	INCLIND BASE HOLDER (S)	1	
29(1)	VMD2078	P5 STOPPER BASE	1	
30(1)	VXA4927	P5 POST STOPPER	1	
31(1)	VMA8873	INCLIND BASE HOLDER (T)	1	
32(1)	VMD2101	OPENER PIECE	1	
33(1)	VML2776	TENSION SPRING ARM	1	
34(1)	VMX1544	P4 UPPER LIMITER	1	
35(1)	VMX2175	P4 SLEEVE	1	
36(1)	VMX2176	P4 LOWER LIMITER	1	
40(1)	VXA4982	INCLIND BASE (S) UNIT	1	
41(1)	VXP1415	ROLLER POST UNIT	2	
42(1)	VXA4984	INCLIND BASE (T) UNIT	1	
44(1)	VXA4974	HEAD AMP MOUNT ANGLE (R) U.	1	
45(1)	VMS5383	CASSETTE POSITION FIXTURE	1	
46(1)	VXL2310	REVIEW ARM UNIT	1	
47(1)	VXL2306	P5 ARM UNIT	1	
48(1)	VXL2243	TAKE UP TENSION REGULATOR ARM UNIT	1	
49(1)	VXL2246	PINCH ARM UNIT	1	
50(1)	VMB2434	TENSION SPRING	1	
51(1)	VXL2309	TENSION ARM (1) UNIT	1	
52(1)	VXZ0310	TENSION BAND UNIT	1	
60(1)	VXR0221	SUPPLY REEL TABLE UNIT	1	
61(1)	VXR0222	TAKE UP REEL TABLE UNIT	1	
62(1)	VXS0114	EARTH PLATE	1	
63(1)	VXZ0312	SUPPLY BRAKE ARM UNIT	1	
64(1)	VXZ0313	TAKE UP BRAKE ARM UNIT	1	
70(1)	VEG1023	CYLINDER UNIT	1	NV-SD40EG/B
70(1)	VEG1024	CYLINDER UNIT	1	NV-SD30EG/B
71(1)	VEH0598	UPPER CYLINDER UNIT	1	NV-SD40EG/B
71(1)	VEH0599	UPPER CYLINDER UNIT	1	NV-SD30EG/B
72(1)	VJR0082	RT TERMINAL	1	
B1(1)	VHD0773	SCREW	2	
B2(1)	XTV26+6F	SCREW	4	
B3(1)	XTV26+4F	SCREW	2	
B4(1)	XIN3+6FFZ	SCREW	1	
B5(1)	VHD0425	SCREW	2	
B6(1)	VHD0762	SCREW	3	
B7(1)	XTV26+6FZ	SCREW	2	
B8(1)	XTV26+8F	SCREW	3	
B9(1)	VHD0760	SCREW	2	
B10(1)	VHD0342	SCREW	3	
N1(1)	VHN0192	NUT	3	
N2(1)	VHN0193	NUT	1	
W1(1)	VWX2208	WASHER	3	
W2(1)	XWGV26D5G	WASHER	1	

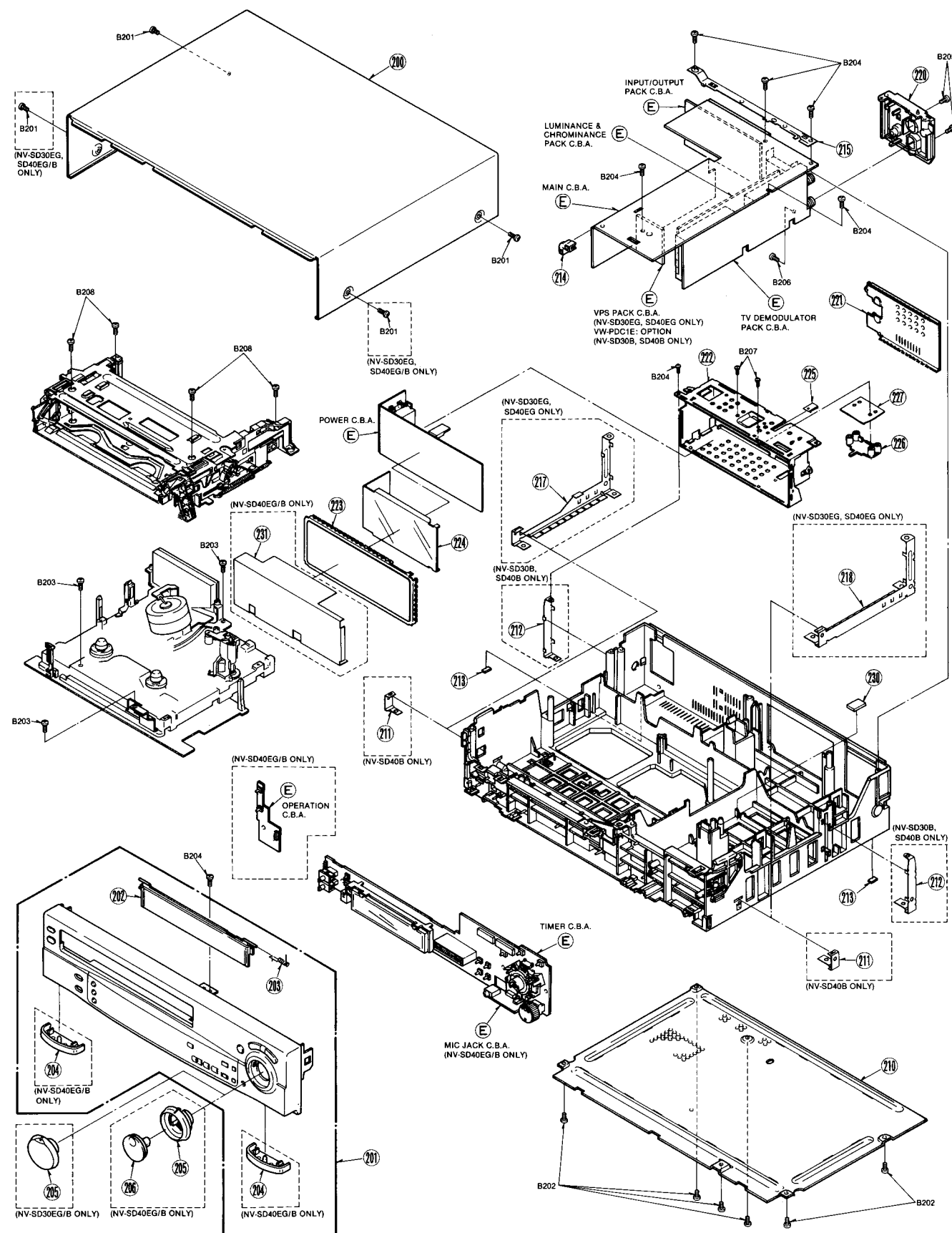
Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
100(2)	VEK5927	STATOR UNIT	1	
101(2)	VBK0061	FC HEAD	1	
103(2)	VMA8765	ROTOR STOPPER	1	
104(2)	VWK1927	OIL SEAL	2	
105(2)	VXD0140	HOUSING UNIT	1	
106(2)	VXP1350	ROTOR UNIT	1	
107(2)	VXQ0297	THRUST SCREW UNIT	1	
108(2)	VDG0913	MAIN CAM GEAR	1	
109(2)	VDG0861	SUPPLY REEL GEAR	1	
110(2)	VDG0862	TAKE UP REEL GEAR	1	
111(2)	VDG0868	WORM WHEEL GEAR	1	
112(2)	VDG0885	SUB CAM GEAR	1	
113(2)	VDV0235	TIMING BELT	1	
120(2)	VDG0866	WORM GEAR	1	
121(2)	VEM0427	LOADING MOTOR (1) UNIT	1	
123(2)	VMD1942	MOTOR BRACKET	1	
126(2)	VML2725	IDLER CONTROL LEVER	1	
127(2)	VSS0365	MODE SW	1	
128(2)	VXA4797	SS BRAKE BASE UNIT	1	
129(2)	VXA4799	TENSION ROLLER UNIT	1	
140(2)	VXL2229	IDLER ARM UNIT	1	
141(2)	VXL2230	DIRECT LEVER UNIT	1	
142(2)	VXL2299	SUPPLY LOADING ARM UNIT	1	
143(2)	VXL2300	TAKE UP LOADING ARM UNIT	1	
144(2)	VXL2307	MAIN LEVER UNIT	1	
145(2)	VXP1409	CENTRE CLUTCH	1	
150(2)	VMD1926	LED HOLDER	1	
151(2)	VMD1927	PHOTO TRANSISTOR HOLDER	2	
152(2)	VES0695	SAFETY TAB SW	1	
153(2)	VJBO0563	MECHANISM CONNECTION C.B.	1	ELECTRICAL PARTS ON THE C.B.A. IS LISTED ON ELECTRICAL PARTS LIST.
154(2)	VMD2029	REEL SHAFT GUIDE	1	
B101	VHD0772	SCREW	4	
B102	XTV26+8F	SCREW	2	
B103	XTV26+6F	SCREW	3	
B104	VHD0753	SCREW	3	
B105	VHD0754	SCREW	1	
B106	XSB26+4FZ	SCREW	1	
W101	VWX2208	WASHER	3	

② CHASSIS PARTS SECTION (2)



③ CASING PARTS SECTION



Note: 1. * Be sure to make your orders of replacement parts according to this list.
2. **IMPORTANT SAFETY NOTICE**
Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

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Note:1.* Be sure to make your orders of replacement parts according to this list.

2. IMPORTANT SAFETY NOTICE

Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
300(4)	VQT5198	OPERATING INSTRUCTIONS (GERMAN)	1	<1>NV-SD30EG SUPPLIED FROM M.B.
300(4)	VQT5195	OPERATING INSTRUCTIONS (ENGLISH)	1	<1>NV-SD30B SUPPLIED FROM M.B.
300(4)	VQT5213	OPERATING INSTRUCTIONS (GERMAN)	1	<1>NV-SD40EG SUPPLIED FROM M.B.
300(4)	VQT5210	OPERATING INSTRUCTIONS (ENGLISH)	1	<1>NV-SD40B SUPPLIED FROM M.B.
301(4)	VQC2119	PROGRAMME SHEET	1	NV-SD30EG, SD40EG
302(4)	VJA0710	DIN RF CABLE	1	NV-SD30EG, SD40EG
302(4)	VJA0376	DIN RF CABLE	1	NV-SD30B, SD40B
303(4)	VJA0664	AC CORD	1	<1>NV-SD30EG, SD40EG
303(4)	VJA0733	AC CORD	1	<1>NV-SD30B, SD40B
305(4)	VEQ1473	REMOTE CONTROLLER (BUILD IN DIGITAL SCANNER)	1	NV-SD30EG, SD40EG SUPPLIED FROM M.B.
305(4)	VEQ1485	REMOTE CONTROLLER	1	NV-SD30B, SD40B SUPPLIED FROM M.B.
306(4)	VGP3344	DOOR PANEL	1	NV-SD30EG, SD40EG
307(4)	VKF1977	BATTERY COVER	1	NV-SD30EG, SD40EG
308(4)	VQG3046	CAP	1	NV-SD30EG, SD40EG
320(4)	VPK0825	ACCESSORIES PACKING	1	
321(4)	VPN3542	CUSHION (L)	1	
322(4)	VPN3543	CUSHION (R)	1	
323(4)	VPG6855	PACKING	1	NV-SD30EG SUPPLIED FROM M.B.
323(4)	VPG6857	PACKING	1	NV-SD30B SUPPLIED FROM M.B.
323(4)	VPG6861	PACKING	1	NV-SD40EG SUPPLIED FROM M.B.
323(4)	VPG6863	PACKING	1	NV-SD40B SUPPLIED FROM M.B.

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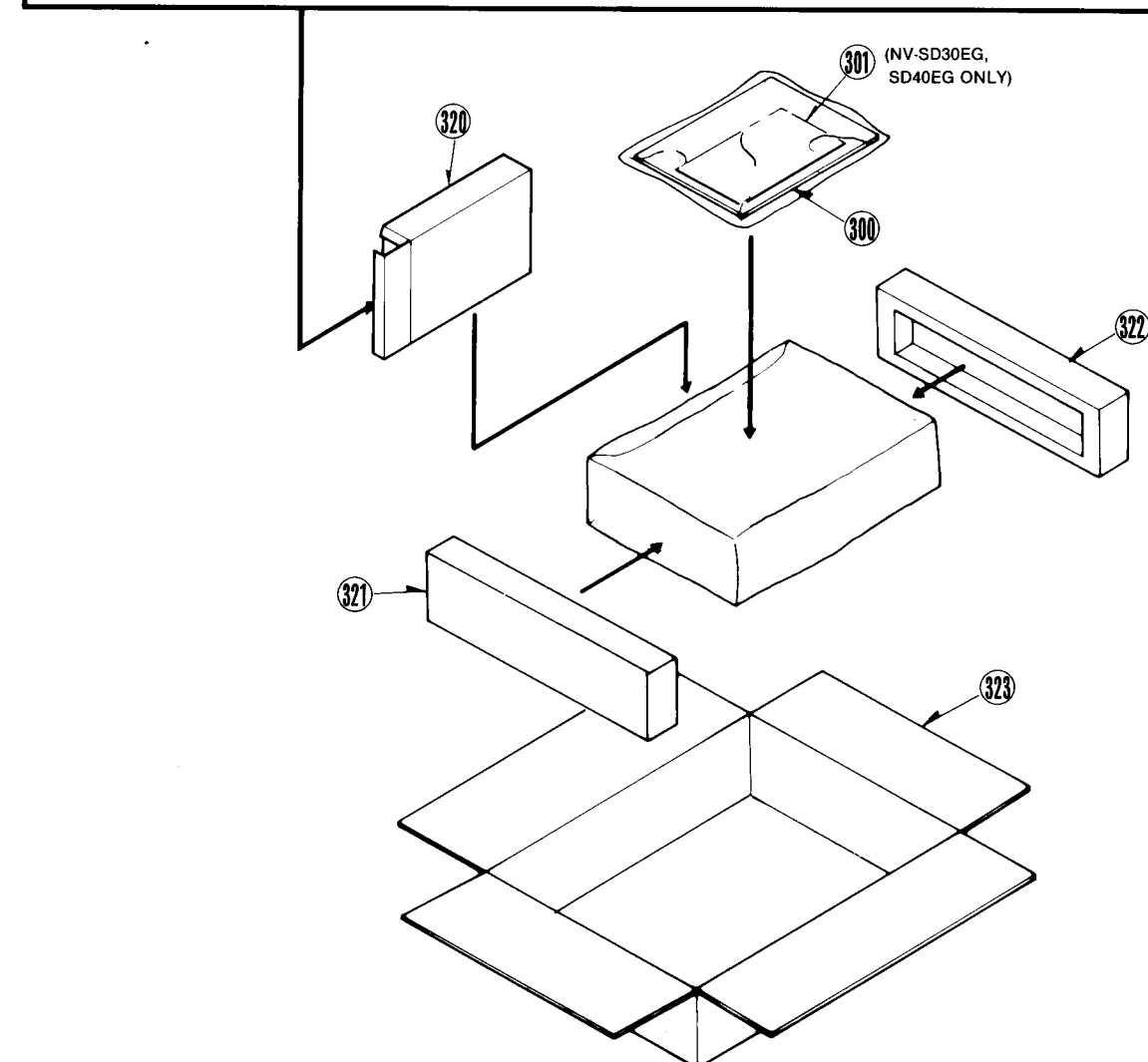
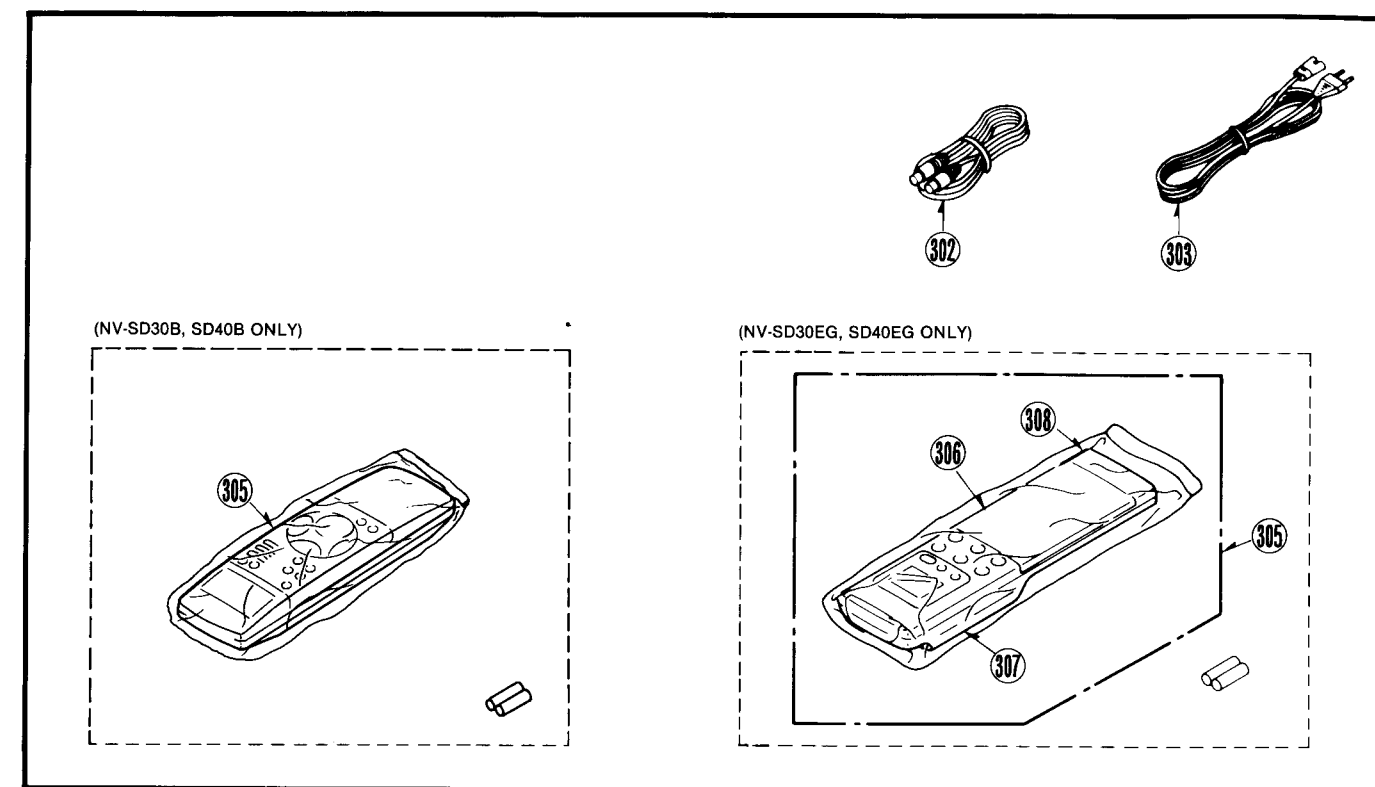
Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
200(3)	VGM0988	TOP PANEL	1	NV-SD30EG,SD40EG/B SUPPLIED FROM M.B.V.
200(3)	VGM0974	TOP PANEL	1	NV-SD30B
201(3)	VYP5255	FRONT PANEL UNIT	1	NV-SD30EG SUPPLIED FROM M.B.V.
201(3)	VYP5250	FRONT PANEL UNIT	1	NV-SD30B SUPPLIED FROM M.B.V.
201(3)	VYP5253	FRONT PANEL UNIT	1	NV-SD40EG SUPPLIED FROM M.B.V.
201(3)	VYP5252	FRONT PANEL UNIT	1	NV-SD40B SUPPLIED FROM M.B.V.
202(3)	VKF1978	BLINDER PANEL	1	
203(3)	VMB2521	BLINDER SPRING	1	
204(3)	VKA0153	LEG	1	NV-SD40EG/B
205(3)	VGU6129	SHUTTLE KNOB	1	NV-SD30EG/B
205(3)	VGU6124	SHUTTLE KNOB	1	NV-SD40EG/B
206(3)	VXU1139	JOG NOB UNIT	1	NV-SD40EG/B
210(3)	VKU0379	BOTTOM PLATE	1	
211(3)	VMP3821	SIDE ANGLE (F)	2	NV-SD40B
212(3)	VMP3940	SIDE ANGLE (R)	2	NV-SD30B,SD40B
213(3)	VKA0122	FOOT	2	
214(3)	VJF0374	MAIN C.B.A. HOLDER	1	
215(3)	VMP3939	EARTH ANGLE	1	
217(3)	VMP3982	FTZ ANGLE (L)	1	NV-SD30EG,SD40EG
218(3)	VMP3983	FTZ ANGLE (R)	1	NV-SD30EG,SD40EG
220(3)	VJH0683	RF ANT TERMINAL PLATE	1	NV-SD30EG,SD40EG
220(3)	VJH0684	RF ANT TERMINAL PLATE	1	NV-SD30B,SD40B
221(3)	VSC3110	POWER SHIELD COVER (TOP)	1	
222(3)	VXA4925	POWER SHIELD COVER (MAIN) U	1	
223(3)	VSC3375	POWER SHIELD COVER (BOTTOM)	1	
224(3)	VMZ1854	POWER BARRIER	1	
225(3)	VMO0357	TR. HOLDER SPRING	1	
226(3)	VGO1377	TR. HOLDER	1	
227(3)	VMZ1224	INSULATION SHEET	1	
230(3)	VGO0727	SPACER	1	
231(3)	VMZ2123	BARRIER	1	NV-SD40EG/B
B201	XTW3+10TFZ	SCREW	4	NV-SD30EG,SD40EG/B
B201	XTW3+10TFZ	SCREW	2	NV-SD30B
B202	VHD0059	SCREW	6	
B203	VHD0168	SCREW	3	
B204	VHD0773	SCREW	7	
B205	XTV3+12JFZ	SCREW	2	
B206	XTV3+6F	SCREW	1	
B207	XTV3+8G	SCREW	2	
B208	XTV26+8FR	SCREW	4	

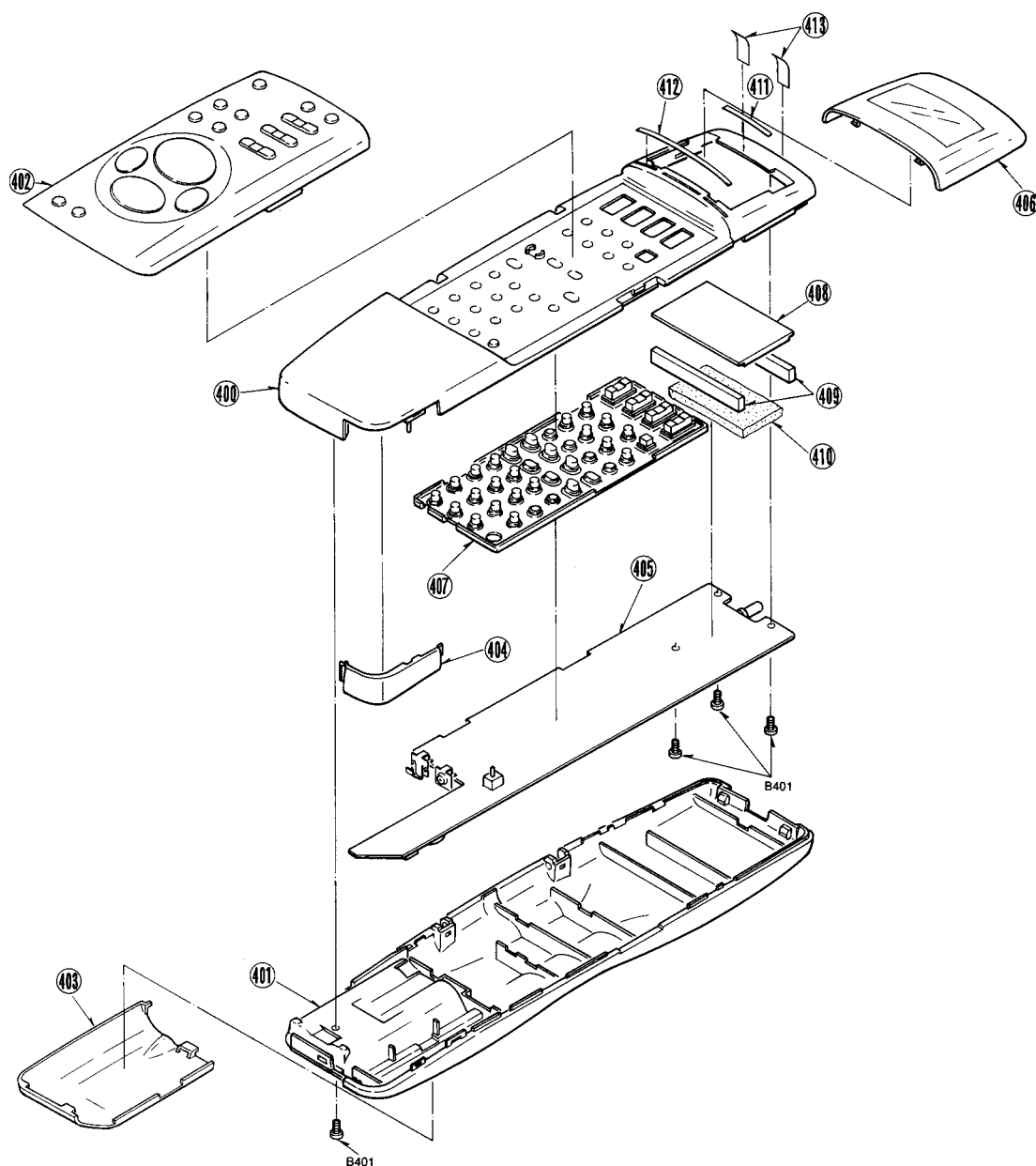
Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
300(4)	VQT5198	OPERATING INSTRUCTIONS (GERMAN)	1	(!)>NV-SD30EG SUPPLIED FROM M.B.V.
300(4)	VQT5195	OPERATING INSTRUCTIONS (ENGLISH)	1	(!)>NV-SD30B SUPPLIED FROM M.B.V.
300(4)	VQT5213	OPERATING INSTRUCTIONS (GERMAN)	1	(!)>NV-SD40EG SUPPLIED FROM M.B.V.
300(4)	VQT5210	OPERATING INSTRUCTIONS (ENGLISH)	1	(!)>NV-SD40B SUPPLIED FROM M.B.V.
301(4)	VQC2119	PROGRAMME SHEET	1	NV-SD30EG,SD40EG
302(4)	VJA0710	DIN RF CABLE	1	NV-SD30EG,SD40EG
302(4)	VJA0376	DIN RF CABLE	1	NV-SD30B,SD40B
303(4)	VJA0664	AC CORD	1	(!)>NV-SD30EG,SD40EG
303(4)	VJA0733	AC CORD	1	(!)>NV-SD30B,SD40B
305(4)	VEQ1473	REMOTE CONTROLLER (BUILD IN DIGITAL SCANNER)	1	NV-SD30EG,SD40EG SUPPLIED FROM M.B.V.
305(4)	VEQ1485	REMOTE CONTROLLER	1	NV-SD30B,SD40B SUPPLIED FROM M.B.V.
306(4)	VGP3344	DOOR PANEL	1	NV-SD30EG,SD40EG
307(4)	VKF1977	BATTERY COVER	1	NV-SD30EG,SD40EG
308(4)	VGO3046	CAP	1	NV-SD30EG,SD40EG
320(4)	VPK0825	ACCESSORIES PACKING	1	
321(4)	VPN3542	CUSHION (L)	1	
322(4)	VPN3543	CUSHION (R)	1	
323(4)	VPG6855	PACKING	1	NV-SD30EG SUPPLIED FROM M.B.V.
323(4)	VPG6857	PACKING	1	NV-SD30B SUPPLIED FROM M.B.V.
323(4)	VPG6861	PACKING	1	NV-SD40EG SUPPLIED FROM M.B.V.
323(4)	VPG6863	PACKING	1	NV-SD40B SUPPLIED FROM M.B.V.

4 PACKING PARTS SECTION



⑤ REMOTE CONTROLLER UNIT (NV-SD30B, SD40B)



Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
400(5)	VYK4841	TOP COVER UNIT	1	NV-SD30B, SD40B SUPPLIED FROM M.B.V.
401(5)	VYK4517	BOTTOM COVER UNIT	1	NV-SD30B, SD40B
402(5)	VYK4842	DOOR PANEL UNIT	1	NV-SD30B, SD40B SUPPLIED FROM M.B.V.
403(5)	VYK4844	BATTERY COVER UNIT	1	NV-SD30B, SD40B SUPPLIED FROM M.B.V.
404(5)	VGQ3040	CAP	1	NV-SD30B, SD40B
405(5)		REMOTE CONTROLLER C.B.A.	1	The C.B.A. is not supplied as spare part.
406(5)	VKW1668	IR WINDOW	1	NV-SD30B, SD40B
407(5)	VSP0734	RUBBER CONTACT	1	NV-SD30B, SD40B SUPPLIED FROM M.B.V.
408(5)	VSL0287	LCD	1	NV-SD30B, SD40B SUPPLIED FROM M.B.V.
409(5)	VSQ0809	CONDUCTIVE RUBBER	2	NV-SD30B, SD40B

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
410(5)	VGQ3027	LCD SPACER	1	NV-SD30B, SD40B
411(5)	VGQ3028	AGGLUTINATED TAPE (A)	1	NV-SD30B, SD40B
412(5)	VGQ3029	AGGLUTINATED TAPE (B)	1	NV-SD30B, SD40B
413(5)	VGQ3077	AGGLUTINATED FILM	2	NV-SD30B, SD40B
B401(5)	XTB2+6GF2	SCREW	4	NV-SD30B, SD40B
		SERVICE FIXTURES & TOOLS		
	VFJ8125H3F	VHS ALIGNMENT TAPE(PAL)	1	
	VFK0335	RETAINING RING REMOVER (3mm/4mm)	1	
	VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
	VFK0326	HEX WRENCH SET	1	
	VFK0132	BACK TENSION METER	1	
	VFK0343	CHECK LIGHT	1	
	VFK27	HEAD CLEANING STICK	1	
	MOR265	MORLYTONE GREASE	1	
	VFK0341	UPPER CYLINDER REMOVER	1	
	VFK0680	WHITE GREASE	1	
	VFK0851	CENTRE FIXING TOOL	1	
	VFK0330	FINE ADJUSTMENT GEAR DRIVER	1	

5-2. ELECTRICAL REPLACEMENT PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
 2. IMPORTANT SAFETY NOTICE : Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.
 3. Unless otherwise specified, All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICRO-FARADS(uf), P=uuF.
 4. The P.C. Board units marked with "■" show below the main assembled parts.
 5. The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEPO3971J	MAIN C.B.A.	1	(RTL)NV-SD30EG SUPPLIED FROM M.B.V.
	VEPO3971L	MAIN C.B.A.	1	(RTL)NV-SD30B SUPPLIED FROM M.B.V.
	VEPO3971H	MAIN C.B.A.	1	(RTL)NV-SD40EG SUPPLIED FROM M.B.V.
	VEPO3971K	MAIN C.B.A.	1	(RTL)NV-SD40B SUPPLIED FROM M.B.V.
	VEPO3973B	INPUT/OUTPUT PACK C.B.A.	1	(RTL)NV-SD30EG SUPPLIED FROM M.B.V.
	VEPO3973D	INPUT/OUTPUT PACK C.B.A.	1	(RTL)NV-SD30B SUPPLIED FROM M.B.V.
	VEPO3973A	INPUT/OUTPUT PACK C.B.A.	1	(RTL)NV-SD40EG SUPPLIED FROM M.B.V.
	VEPO3973C	INPUT/OUTPUT PACK C.B.A.	1	(RTL)NV-SD40B SUPPLIED FROM M.B.V.
	VEPO3A01A1PE	LUMINANCE & CHROMINANCE PACK C.B.A.	1	(RTL)NV-SD30EG SUPPLIED FROM M.B.V.
	VEPO3A01BPE	LUMINANCE & CHROMINANCE PACK C.B.A.	1	(RTL)NV-SD30B SUPPLIED FROM M.B.V.
	VEPO3A01DPE	LUMINANCE & CHROMINANCE PACK C.B.A.	1	(RTL)NV-SD40EG SUPPLIED FROM M.B.V.
	VEPO3A01EPE	LUMINANCE & CHROMINANCE PACK C.B.A.	1	(RTL)NV-SD40B SUPPLIED FROM M.B.V.
	VEPO7538G	VPS C.B.A.	1	(RTL) NV-SD30EG, SD40EG
	VEPO7726A	TV DEMODULATOR PACK C.B.A.	1	(RTL) NV-SD30EG, SD40EG SUPPLIED FROM M.B.V.
	VEPO7645S	TV DEMODULATOR PACK C.B.A.	1	(RTL)NV-SD30B, SD40B SUPPLIED FROM M.B.V.
	VEPO5182APE	HEAD AMP C.B.A.	1	(RTL)NV-SD30EG/B SUPPLIED FROM M.B.V.
	VEPO5182BPE	HEAD AMP C.B.A.	1	(RTL)NV-SD40EG/B SUPPLIED FROM M.B.V.
	VEPO7701D	TIMER C.B.A.	1	(RTL)NV-SD30EG SUPPLIED FROM M.B.V.
	VEPO7701F	TIMER C.B.A.	1	(RTL)NV-SD30B SUPPLIED FROM M.B.V.
	VEPO7699D	TIMER C.B.A.	1	(RTL)NV-SD40EG INCLUDING THE MIC C.B.A. (VEPO0577A). SUPPLIED FROM M.B.V.
	VEPO7699F	TIMER C.B.A.	1	(RTL)NV-SD40B INCLUDING THE MIC C.B.A. (VEPO0577A).

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEPO0577A	MIC C.B.A.	1	SUPPLIED FROM M.B.V. (RTL)NV-SD40EG/B INCLUDED IN TIMER C.B.A. (VEPO7699D, F). SUPPLIED FROM M.B.V.
	VEPO7716A	OPERATION C.B.A.	1	(RTL)NV-SD40EG/B SUPPLIED FROM M.B.V.
	VEPO1518G	POWER C.B.A.	1	(RTL)(!) NV-SD30EG, SD40EG SUPPLIED FROM M.B.V.
	VEPO1518H	POWER C.B.A.	1	(RTL)(!) NV-SD30B, SD40B SUPPLIED FROM M.B.V.
	-----	MECHANISM CONNECTION C.B.A.	1	(RTL) NOT SUPPLIED AS C.B.A. (C.B. IS LISTED ON MECHANICAL PARTS LIST)
	VEPO0586A	POWER TRANSISTOR C.B.A.	1	(RTL)
	-----	MOTOR C.B.A.	1	(RTL) C.B.A. IS INCLUDED IN LOADING MOTOR (1) UNIT. (VEM0427)
	ENC17984	RF CONVERTER	1	(!)>NV-SD30EG, SD40EG
	ENC17990	RF CONVERTER	1	(!)>NV-SD30B, SD40B
	ENV57851H6	TUNER	1	(!)>NV-SD30EG, SD40EG
	ENV87837H3R	TUNER	1	(!)>NV-SD30B, SD40B
F1101	VSFO107C16	FUSE	1	(!)
	■ VEPO3971J	MAIN C.B.A.		(RTL)NV-SD30EG SUPPLIED FROM M.B.V.
		CAPACITORS		
C1001	ECA1EM101	E. CAPACITOR 25V 100U	1	
C1002	ECEA1CK101	E. CAPACITOR 16V 100U	1	
C1003	ECEA0JK330	E. CAPACITOR 6.3V 33U	1	
C1004	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C2001	ECEA0JK220	E. CAPACITOR 6.3V 22U	1	
C2002	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C2003	ECUM1H392KBN	C. CAPACITOR CH 50V 3900P	1	
C2004	ECUM1H2232FN	C. CAPACITOR 50V 0.022U	1	
C2005	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C2006	ECUM1H472KBN	C. CAPACITOR CH 50V 4700P	1	
C2007	ECQV1H334J2	P. CAPACITOR 50V 0.33U	1	
C2008	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C2009,10	ECEA1HKN3R3	E. CAPACITOR 50V 3.3U	2	
C2011	ECUM1H471JCN	C. CAPACITOR 50V 470P	1	
C2012	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C2013	ECFA0JK221	E. CAPACITOR 6.3V 220U	1	
C2014	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C2015	ECEA1HK3R3	E. CAPACITOR 50V 3.3U	1	
C2016	ECEA0JK220	E. CAPACITOR 6.3V 22U	1	
C2017	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C2018	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C2019	ECUM1H2232FN	C. CAPACITOR 50V 0.022U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C2020	ECUM1H392KBN	C. CAPACITOR CH 50V 3900P	1	
C2021	ECEA1HK4R7	E. CAPACITOR 50V 4.7U	1	
C2022	ECAQJ221	E. CAPACITOR 6.3V 220U	1	
C2023	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C2024	ECQV1H683JZ	P. CAPACITOR 50V 0.068U	1	
C2501	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C2502	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C2503-05	ECUM1H104KBM	C. CAPACITOR CH 50V 0.1U	3	
C2506	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C2507-09	ECEA1VKN4R7	E. CAPACITOR 35V 4.7U	3	
C2510	ECUM1H4732FN	C. CAPACITOR CH 50V 0.047U	1	
C2511	ECEA0JK101	E. CAPACITOR 6.3V 100U	1	
C2512	ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
C2514	ECEA1CK101	E. CAPACITOR 16V 100U	1	
C2515-17	ECEA1HK2R2	E. CAPACITOR 50V 2.2U	3	
C2518-21	ECUM1H333KBN	C. CAPACITOR CH 50V 0.033U	4	
C2522	ECUM1E2242FN	C. CAPACITOR CH 25V 0.22U	1	
C2523	ECUM1C1052FM	C. CAPACITOR CH 16V 1U	1	
C2524, 25	ECEA1CK470	E. CAPACITOR 16V 47U	2	
C2526	ECAQJ221	E. CAPACITOR 6.3V 220U	1	
C2527	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C2528, 29	ECUM1H333KBN	C. CAPACITOR CH 50V 0.033U	2	
C2530	ECQV1H683JZ	P. CAPACITOR 50V 0.068U	1	
C2531	ECUM1C4742FM	C. CAPACITOR CH 16V 0.47U	1	
C2532, 33	ECUM1C1052FN	C. CAPACITOR CH 16V 1U	2	
C2534, 35	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	2	
C2536	ECUM1C4742FM	C. CAPACITOR CH 16V 0.47U	1	
C2555	ECEA1CK101	E. CAPACITOR 16V 100U	1	
C2556	ECUM1C1052FM	C. CAPACITOR CH 16V 1U	1	
C2557	ECEA0JK220	E. CAPACITOR 6.3V 22U	1	
C2558	ECUM1C1052FM	C. CAPACITOR CH 16V 1U	1	
C2559	ECEA1AK330	E. CAPACITOR 10V 33U	1	
C3001	ECAQJ471	E. CAPACITOR 6.3V 470U	1	
C3003	ECUM1C1052FN	C. CAPACITOR CH 16V 1U	1	
C3004	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C3005	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C3006, 07	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	2	
C3011	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C3012	ECUM1H681JCN	C. CAPACITOR 50V 680P	1	
C3013	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C3018	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1	
C3019	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C3020	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C3021	ECEA0JK101	E. CAPACITOR 6.3V 100U	1	
C3022	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C3023	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C3026	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C3029	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C3030	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C3031	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C3033	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C3034	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C4001	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4003	ECQB1H273JH	P. CAPACITOR 50V 0.027U	1	
C4005	ECQB1H123JH	P. CAPACITOR 50V 0.01U	1	
C4007	ECUM1H681JCN	C. CAPACITOR 50V 680P	1	
C4008	ECEA1EK4R7	E. CAPACITOR 25V 4.7U	1	
C4009	ECEA1HK010	E. CAPACITOR 50V 1U	1	
C4010	ECEA1CK330	E. CAPACITOR 16V 33U	1	
C4011	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C4012	ECQB1H102KZ	P. CAPACITOR 50V 1000P	1	
C4013	ECEA16M33	E. CAPACITOR 16V 33U	1	
C4014	ECQP1332JZ	P. CAPACITOR 100V 4700P	1	
C4015	ECCD2H181J	C. CAPACITOR 500V 180P	1	
C4016	ECQB1H153JH	P. CAPACITOR 50V 0.015U	1	
C4019	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C4022	ECUM1H471JCN	C. CAPACITOR 50V 470P	1	
C4023	ECEA10M22	E. CAPACITOR 10V 22U	1	
C4024	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C4025	ECEA16M10R	E. CAPACITOR 16V 10U	1	
C4026	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C4027	ECQB1H822KZ	P. CAPACITOR 50V 8200P	1	
C4028	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4029	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C4030	ECUM1H1022FN	C. CAPACITOR CH 50V 1000P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4031	ECEA0JK101	E. CAPACITOR 6.3V 100U	1	
C4032	ECQB1H102JH	P. CAPACITOR 50V 1000P	1	
C4033	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C4034, 35	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C4037	ECKF1H562KB	C. CAPACITOR 50V 5600P	1	
C4038	ECKF1H391KB	C. CAPACITOR 50V 390P	1	
C6001	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	1	
C6002	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C6003	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C6004	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C6005	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	1	
C6008	ECEA1HK3R3	E. CAPACITOR 50V 3.3U	1	
C6009	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C6010	ECEA1HK010	E. CAPACITOR 50V 1U	1	
C6501	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C6502	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C6503, 04	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	2	
C6505	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C6710	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C6711	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C7001	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C7002	ECEA0JK101	E. CAPACITOR 6.3V 100U	1	
C7701	ECAQJ471	E. CAPACITOR 6.3V 470U	1	
C7702	EES5R5T224N	E. CAPACITOR 5.5V 0.22U	1	
		DIODES		
D1005	MA178	DIODE	1	
D2003	1SS254	DIODE	1	
D2501-04	1SS254	DIODE	4	
D2509	1SS254	DIODE	1	
D2511, 12	1SS254	DIODE	2	
D3002	1SS254	DIODE	1	
D4002	1SS254	DIODE	1	
D6002-05	1SS254	DIODE	4	
D6501-04	1SS254	DIODE	4	
D6711	1SS254	DIODE	1	
D6712	MA723VT	DIODE	1 (VT)	
		CONNECTORS		
FE	VJS1141	CONNECTOR (FEMALE)	1	
		INTEGRATED CIRCUITS		
IC2501	NA3814K	IC	1	
IC2502	XRA6439P	IC	1	
IC2503	LM358PS	IC	1	
IC4001	XRA7766AS	IC	1	
IC6001	MN67434VRRV	IC	1	
IC6501	BA6219B	IC	1	
IC6502	LM358PS	IC	1	
IC6710	M66006FP	IC	1	
		COILS		
L2001	ELESQ101KA	COIL 100UH	1	
L2501	ELESQ101KA	COIL 100UH	1	
L2503	VLPO125	COIL	1	
L3002	ELESQ101KA	COIL 100UH	1	
L3003	ELESQ120KA	COIL 12UH	1	
L3004	ELESQ101KA	COIL 100UH	1	
L3007	ELESQ6R8JA	COIL 6.8UH	1	
L3008	ELESQ101KA	COIL 100UH	1	
L4001	VLQEL07F153J	COIL 15MH	1	
L4002	ELESQ471KA	COIL 470UH	1	
L6001	VLPO074	COIL	1	
L6501	VLPO074	COIL	1	
L6701	ELESE101KA	COIL 100UH	1	
L7002, 03	ELESQ101KA	COIL 100UH	2	
L7004	ELESQ1ROKA	COIL 1UH	1	
L7007	ELJFC1ROKB	COIL 1UH	1	
		CONNECTORS		

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P202	VJS1237T	CONNECTOR (FEMALE)	1		R2036	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
P1001	VJS193E013A	CONNECTOR (FEMALE)	1		R2037	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
P1506	VJS1736T	CONNECTOR (FEMALE) 3P	1		R2038	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
P2501	VJS193E015A	CONNECTOR (FEMALE)	1		R2039	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
P2502	VJP1230T	CONNECTOR (MALE) 3P	1		R2501	ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
P2502	VJS1736T	CONNECTOR (FEMALE) 3P	1		R2502	ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
P2503	VJP1237T	CONNECTOR (MALE) 10P	1		R2503-05	ERDS2TJ150	C.RESISTOR 1/4W 15	3	
P2503	VJS1237T	CONNECTOR (FEMALE)	1		R2506	ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	
P3001	VJS1658	CONNECTOR (FEMALE)	1		R2507	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
P4002	VJP1230T	CONNECTOR (MALE) 3P	1		R2508	EROS2CK6800	M.RESISTOR 1/4W 680	1	
P4002	VJS1230T	CONNECTOR (FEMALE)	1		R2509	ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
P4003	VJS2331	CONNECTOR (FEMALE) 6P	1		R2510-12	ERDS2TJ560	C.RESISTOR 1/4W 56	3	
P6001	VJS3193E013A	CONNECTOR (FEMALE)	1		R2513	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
P6002	VJS1657	CONNECTOR (FEMALE)	1		R2514	ERDS1TJ561	C.RESISTOR 1/2W 560	1	
P6501	VJS3193E013A	CONNECTOR (FEMALE)	1		R2515	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
					R2516	ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
					R2517	ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
PP3001	VJP3044G009W	CONNECTOR (MALE)	1		R2518	ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
PP3002	VJP3044G012W	CONNECTOR (MALE)	1		R2519	ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
PP3003	VJP3044G006W	CONNECTOR (MALE)	1		R2520	ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
PP3004	VJP3043G011W	CONNECTOR (MALE)	1		R2521	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
PP3005	VJP3043G009W	CONNECTOR (MALE)	1		R2522	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
PP6707	VJP3043G010W	CONNECTOR (MALE)	1		R2523	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
PP7001-03	VJP3043A005W	CONNECTOR (MALE) 5P	3		R2524,25	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
PP7004	VJP3043A006W	CONNECTOR (MALE) 6P	1		R2526	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
PP7005	VJP3043A004W	CONNECTOR (MALE) 4P	1		R2527	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
					R2538,39	ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
					R2542,43	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
		TRANSISTORS			R2544	ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
Q2003	MSB709	TRANSISTOR	1		R2545	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
Q2004	MSD601	TRANSISTOR-RESISTOR	1		R2546	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
Q2502	2SB1321-R	TRANSISTOR	1 (R,S)		R2551	ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
Q2504	MSB709	TRANSISTOR	1		R2554	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
Q2505	MSD601	TRANSISTOR-RESISTOR	1		R2555,56	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
Q2506	2SD1991	TRANSISTOR	1		R2557	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
Q2507	2SD1991A	TRANSISTOR	1		R2558	ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
Q3001	MSB709-R	TRANSISTOR	1		R2560	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
Q3002	MSD601-R	TRANSISTOR	1		R2561,62	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
Q3003	MSC2295-B	TRANSISTOR	1		R2568	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
Q3006	MSB710	TRANSISTOR	1		R3001	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
Q3007	MSB710-R	TRANSISTOR	1 (R,S)		R3003	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
Q4001	MSD602-R	TRANSISTOR	1		R3006	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
					R3007	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
					R3008	ERDS2TJ471	C.RESISTOR 1/4W 470	1	
		COMBINATION PARTS			R3009	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
QR1001	MRN1402	TRANSISTOR-RESISTOR	1		R3013	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
QR2002	XN1213	TRANSISTOR-TRANSISTOR	1		R3014	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
QR2007	MRN2404	TRANSISTOR-RESISTOR	1		R3015	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
QR2008	UN2210	TRANSISTOR-RESISTOR	1		R3016	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
QR3005	MRN2402	TRANSISTOR-RESISTOR	1		R3018	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
QR3009	MRN1404	TRANSISTOR-RESISTOR	1		R3026	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
QR4001	MRN1404	TRANSISTOR-RESISTOR	1		R3027	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
QR4005	MRN2404	TRANSISTOR-RESISTOR	1		R3028	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
QR6005	MRN1404	TRANSISTOR-RESISTOR	1		R3029	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
QR6501	XN1211	TRANSISTOR-RESISTOR	1		R3030	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
QR6502	UN2216	TRANSISTOR-RESISTOR	1		R3037	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
QR6710	MRN2404	TRANSISTOR-RESISTOR	1		R3038	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
QR7701	MRN1402	TRANSISTOR-RESISTOR	1		R3040	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
					R3043	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
		RESISTORS			R4001	ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R2002	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R4003	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R2003	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1		R4004	ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R2004	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1		R4006	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R2008	ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1		R4007	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R2009,10	ERJ6GMYJ368	M.RESISTOR CH 1/10W 22K	2		R4008	ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R2012	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1		R4010,11	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R2013	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1		R4012	ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R2015,16	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R4013	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2018	ERJ6GMYJ368	M.RESISTOR CH 1/10W 6.8K	1		R4014	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R2021	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1		R4015	ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R2024	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1		R4023	ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R2027,28	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2		R4024	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2034	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R4025	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R2035	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1		R4027	ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
					R4028	ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3018	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1				CONNECTORS		
C3019	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1		FE	VJS1141	CONNECTOR (FEMALE)	1	
C3020	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1						
C3021	ECEAOJK101	E.CAPACITOR 6.3V 100U	1						
C3022	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1				INTEGRATED CIRCUITS		
C3023	ECEAOJK470	E.CAPACITOR 6.3V 47U	1		IC2501	NA3814K	IC	1	
C3026	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		IC2502	XRA6439P	IC	1	
C3029	ECEA1CK470	E.CAPACITOR 16V 47U	1		IC2503	LM358PS	IC	1	
C3030	ECEAOJK470	E.CAPACITOR 6.3V 47U	1		IC4001	XRA7766AS	IC	1	
C3031	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		IC6001	MN67434VRRV	IC	1	
C3033	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		IC6501	BA6219B	IC	1	
C3034	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1		IC6502	LM358PS	IC	1	
C4001	ECEA1CK100	E.CAPACITOR 16V 10U	1		IC6710	M66006FP	IC	1	
C4003	ECQB1H273JH	P.CAPACITOR 50V 0.027U	1						
C4005	ECQB1H123JH	P.CAPACITOR 50V 0.01U	1						
C4007	ECUM1H681JCN	C.CAPACITOR 50V 680P	1				COILS		
C4008	ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1		L2001	ELESQ101KA	COIL 100UH	1	
C4009	ECEA1HK010	E.CAPACITOR 50V 1U	1		L2501	ELESQ101KA	COIL 100UH	1	
C4010	ECEA1CK330	E.CAPACITOR 16V 33U	1		L3002	ELESQ101KA	COIL 100UH	1	
C4011	ECEA1CK470	E.CAPACITOR 16V 47U	1		L3003	ELESQ120KA	COIL 12UH	1	
C4012	ECQB1H102KZ	P.CAPACITOR 50V 1000P	1		L3004	ELESQ101KA	COIL 100UH	1	
C4013	ECEA16M33	E.CAPACITOR 16V 33U	1		L3007	ELESQ68BJA	COIL 6.8UH	1	
C4014	ECQP133ZJZ	P.CAPACITOR 100V 4700P	1		L3008	ELESQ101KA	COIL 100UH	1	
C4015	ECCD2H181J	C.CAPACITOR 500V 180P	1		L4001	VLQEL07F153J	COIL 15MH	1	
C4016	ECQB1H153JH	P.CAPACITOR 50V 0.015U	1		L4002	ELESQ471KA	COIL 470UH	1	
C4019	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1		L6001	VLPO074	COIL	1	
C4022	ECUM1H471JCN	C.CAPACITOR 50V 470P	1		L6501	VLPO074	COIL	1	
C4023	ECEA10M22	E.CAPACITOR 10V 22U	1		L6701	ELESE101KA	COIL 100UH	1	
C4024	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1		L7002	ELESQ101KA	COIL 100UH	1	
C4025	ECEA16M10R	E.CAPACITOR 16V 10U	1		L7004	ELESQ101KA	COIL 1UH	1	
C4026	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1		L7005	ELJPA470KB	COIL 47UH	1	
C4027	ECQB1H822KZ	P.CAPACITOR 50V 8200P	1		L7007	ELJFC10KB	COIL 1UH	1	
C4028	ECEA1CK100	E.CAPACITOR 16V 10U	1						
C4029	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1				CONNECTORS		
C4030	ECUM1H1022FN	C.CAPACITOR CH 50V 1000P	1		P202	VJS1237T	CONNECTOR (FEMALE)	1	
C4031	ECEAOJK101	E.CAPACITOR 6.3V 100U	1		P1001	VJS3193E013A	CONNECTOR (FEMALE)	1	
C4032	ECQB1H102JH	P.CAPACITOR 50V 1000P	1		P1506	VJS1736T	CONNECTOR (FEMALE) 3P	1	
C4033	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		P2501	VJS3193E015A	CONNECTOR (FEMALE)	1	
C4034, 35	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2		P2502	VJP1230T	CONNECTOR (MALE) 3P	1	
C4037	ECKFLH562KB	C.CAPACITOR 50V 5600P	1		P2502	VJS1736T	CONNECTOR (FEMALE) 3P	1	
C6001	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1		P2503	VJP1237T	CONNECTOR (MALE) 10P	1	
C6002	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1		P2503	VJS1237T	CONNECTOR (FEMALE)	1	
C6003	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1		P3001	VJS1658	CONNECTOR (FEMALE)	1	
C6004	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1		P4002	VJP1230T	CONNECTOR (MALE) 3P	1	
C6005	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1		P4002	VJS1230T	CONNECTOR (FEMALE)	1	
C6008	ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1		P4003	VJS2331	CONNECTOR (FEMALE) 6P	1	
C6009	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		P6001	VJS3193E013A	CONNECTOR (FEMALE)	1	
C6010	ECEA1HK010	E.CAPACITOR 50V 1U	1		P6002	VJS1657	CONNECTOR (FEMALE)	1	
C6501	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		P6501	VJS3193E013A	CONNECTOR (FEMALE)	1	
C6502	ECEA1CK470	E.CAPACITOR 16V 47U	1						
C6503, 04	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	2						
C6505	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1						
C6710	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1		PP3001	VJP3044G009W	CONNECTOR (MALE)	1	
C6711	ECEAOJK470	E.CAPACITOR 6.3V 47U	1		PP3002	VJP3044G012W	CONNECTOR (MALE)	1	
C7001	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1		PP3003	VJP3044G006W	CONNECTOR (MALE)	1	
C7004	ECEA1CKS100	E.CAPACITOR 16V 10U	1		PP3004	VJP3043G011W	CONNECTOR (MALE)	1	
C7005	ECKFLH471KB	C.CAPACITOR 50V 470P	1		PP3005	VJP3043G009W	CONNECTOR (MALE)	1	
C7701	ECAOJM471	E.CAPACITOR 6.3V 470U	1		PP6707	VJP3043G010W	CONNECTOR (MALE)	1	
C7702	EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1		PP7001-03	VJP3043A005W	CONNECTOR (MALE) 5P	3	
					PP7004	VJP3043A006W	CONNECTOR (MALE) 6P	1	
					PP7005	VJP3043A004W	CONNECTOR (MALE) 4P	1	
		DIODES							
D1005	MA178	DIODE	1				TRANSISTORS		
D2003	1SS254	DIODE	1		Q2003	MSB709	TRANSISTOR	1	
D2501-04	1SS254	DIODE	4		Q2004	MSD601	TRANSISTOR-RESISTOR	1	
D2509	1SS254	DIODE	1		Q2502	2SB1321-R	TRANSISTOR	1	(R, S)
D2511, 12	1SS254	DIODE	2		Q2504	MSB709	TRANSISTOR	1	
D3002	1SS254	DIODE	1		Q2505	MSD601	TRANSISTOR-RESISTOR	1	
D4002	1SS254	DIODE	1		Q2506	2SD1991	TRANSISTOR	1	
D6002-05	1SS254	DIODE	4		Q2507	2SD1991A	TRANSISTOR	1	
D6501-04	1SS254	DIODE	4		Q3001	MSB709-R	TRANSISTOR	1	
D6711	1SS254	DIODE	1		Q3002	MSD601-R	TRANSISTOR	1	
D6712	MA723VT	DIODE	1	(VT)	Q3003	MSC2295-B	TRANSISTOR	1	
					Q3006	MSB710	TRANSISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q3007	MSB710-R	TRANSISTOR	1	(R,S)	R3006	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
Q4001	MSD602-R	TRANSISTOR	1		R3007	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
					R3008	ERDS2TJ471	C.RESISTOR 1/4W 470	1	
					R3009	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
		COMBINATION PARTS			R3013	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
QR1001	MRN1402	TRANSISTOR-RESISTOR	1		R3014	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
QR2002	XN1213	TRANSISTOR-TRANSISTOR	1		R3015	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
QR2007	MRN2404	TRANSISTOR-RESISTOR	1		R3016	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
QR2008	UN2210	TRANSISTOR-RESISTOR	1		R3018	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
QR3005	MRN2402	TRANSISTOR-RESISTOR	1		R3026	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
QR3009	MRN1404	TRANSISTOR-RESISTOR	1		R3027	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
QR4001	MRN1404	TRANSISTOR-RESISTOR	1		R3028	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
QR4005	MRN2404	TRANSISTOR-RESISTOR	1		R3029	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
QR6005	MRN1404	TRANSISTOR-RESISTOR	1		R3030	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
QR6501	XN1211	TRANSISTOR-RESISTOR	1		R3037	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
QR6502	UN2216	TRANSISTOR-RESISTOR	1		R3038	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
QR7701	MRN1402	TRANSISTOR-RESISTOR	1		R3040	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
					R3043	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
					R4001	ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
		RESISTORS			R4003	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R2002	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R4004	ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R2003	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1		R4006	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R2004	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1		R4007	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R2008	ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1		R4008	ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R2009,10	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R4010,11	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R2012	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1		R4012	ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R2013	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1		R4013	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2015,16	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R4014	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
R2018	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1		R4015	ERJ6GEVJ183	M.RESISTOR CH 1/10W 18K	1	
R2021	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1		R4023	ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R2024	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1		R4024	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2027,28	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2		R4025	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R2034	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R4027	ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R2035	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1		R4028	ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R2036	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		R4029	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2037	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1		R4030	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R2038	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R4032	ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R2039	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1		R4033	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2501	ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1		R4034	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2502	ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1		R4035	ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R2503-05	ERDS2TJ150	C.RESISTOR 1/4W 15	3		R4036	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2506	ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1		R4037	ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R2507	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		R4038	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R2508	EROS2CKG6800	M.RESISTOR 1/4W 680	1		R4039	ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R2509	ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1		R4040	ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2510-12	ERDS2TJ560	C.RESISTOR 1/4W 56	3		R4041,42	ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R2513	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R4043	ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2514	ERDS1TJ561	C.RESISTOR 1/2W 560	1		R6002,03	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R2515	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1		R6004	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2516	ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1		R6005	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R2517	ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1		R6006,07	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R2518	ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1		R6008	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2519	ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1		R6013,14	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R2520	ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1		R6015	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2521	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1		R6021	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1		R6022,23	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R2523	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1		R6024	ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R2524,25	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2		R6028-30	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R2526	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1		R6031	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2527	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1		R6501	ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R2538,39	ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2		R6502	ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R2542,43	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2		R6503	ERJ6GMYG112	M.RESISTOR CH 1/10W 1.1K	1	
R2544	ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1		R6504	ERX1SJR8	M.RESISTOR 1W 1.8	1	
R2545	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1		R6505	ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R2546	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1		R6506	VREO034E512	M.RESISTOR CH 1/10W 5.1K	1	
R2551	ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1		R6507	VREO034E472	M.RESISTOR CH 1/10W 4.7K	1	
R2554	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		R6508,09	VREO034E103	M.RESISTOR CH 1/10W 10K	2	
R2555,56	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2		R6510-12	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R2557	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R6513-15	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R2558	ERJ6GMYG201	M.RESISTOR 1/10W 200	1		R6517	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2560	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R6518	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R2561,62	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R6712	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2568	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R6713	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3001	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R6714	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3003	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1		R6715-19	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6724	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		C2502	ECQV1H104J2	P.CAPACITOR 50V 0.1U	1	
R6726	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		C2503-05	ECUM1H104KFM	C.CAPACITOR CH 50V 0.1U	3	
R6728	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1		C2506	ECQV1H104J2	P.CAPACITOR 50V 0.1U	1	
R7005	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		C2507-09	ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
R7701	ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1		C2510	ECUM1H4732FN	C.CAPACITOR CH 50V 0.047U	1	
R7702	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		C2511	ECEA1JK101	E.CAPACITOR 6.3V 100U	1	
					C2512	ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
		TRANSFORMERS			C2514	ECEA1CK101	E.CAPACITOR 16V 100U	1	
T4001	EIQ7QF014Q	TRANSFORMER	1		C2515-17	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
					C2518-21	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
					C2522	ECUM1E2242FN	C.CAPACITOR CH 25V 0.22U	1	
		VARIABLE RESISTORS			C2523	ECUM1C1052FM	C.CAPACITOR CH 16V 1U	1	
VR2001	EVNDXAA00B54	V.RESISTOR 50K	1		C2524, 25	ECEA1CK470	E.CAPACITOR 16V 47U	2	
VR2011	EVNDXAA00B15	V.RESISTOR 100K	1		C2526	ECQA0JM221	E.CAPACITOR 6.3V 220U	1	
VR2019	EVNDXAA00B15	V.RESISTOR 100K	1		C2527	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
VR3012	EVNDXAA00B52	V.RESISTOR 500	1		C2528, 29	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
VR4002	EVNDXAA00B25	V.RESISTOR 200K	1		C2530	ECQV1H683J2	P.CAPACITOR 50V 0.068U	1	
					C2531	ECUM1C4742FM	C.CAPACITOR CH 16V 0.47U	1	
		CRYSTAL OSCILLATORS			C2532, 33	ECUM1C1052FN	C.CAPACITOR CH 16V 1U	2	
X6001	VSX0479	CRYSTAL OSCILLATOR	1		C2534, 35	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
X7701	VSQ0565	CRYSTAL OSCILLATOR	1		C2536	ECUM1C4742FM	C.CAPACITOR CH 16V 0.47U	1	
					C2555	ECEA1CK101	E.CAPACITOR 16V 100U	1	
		MISCELLANEOUS			C2556	ECUM1C1052FM	C.CAPACITOR CH 16V 1U	1	
	VWJ0749	FLAT CARD CABLE	1 (P6501-P1505)		C2557	ECEA1JK220	E.CAPACITOR 6.3V 22U	1	
	VWJ15HW260MM	FLAT CARD CABLE	1 (P2501-P1507)		C2558	ECUM1C1052FM	C.CAPACITOR CH 16V 1U	1	
	VWJ10AW335MM	FLAT CARD CABLE	1 (P3001-P501)		C2559	ECEA1AK330	E.CAPACITOR 10V 33U	1	
	VWJ13HW105MM	FLAT CARD CABLE	1 (P1001-P1102)		C3001	ECQA0JM471	E.CAPACITOR 6.3V 470U	1	
	VWJ131W140BB	FLAT CARD CABLE	1 (P6001-P7501)		C3003	ECUM1C1052FN	C.CAPACITOR CH 16V 1U	1	
	VWJ090W140BB	FLAT CARD CABLE	1 (P6002-P7502)		C3004	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
	VEEB284	FLAT CARD CABLE	1 (P4002-FE HEAD)		C3005	ECEA1CK470	E.CAPACITOR 16V 47U	1	
	VEEB285	FLAT CARD CABLE	1 (P2503-P202)		C3006, 07	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	2	
	VEEB286	FLAT CARD CABLE	1 (P2502-P1508)		C3011	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
					C3012	ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
					C3013	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
					C3015	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
					C3016	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
					C3018	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
					C3019	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
					C3020	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
					C3021	ECEA1JK101	E.CAPACITOR 6.3V 100U	1	
					C3022	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
					C3023	ECEA1JK470	E.CAPACITOR 6.3V 47U	1	
					C3026	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
					C3029	ECEA1CK470	E.CAPACITOR 16V 47U	1	
	VEP03971H	MAIN C.B.A.		(RTL)NV-SD40EG	C3030	ECEA1JK470	E.CAPACITOR 6.3V 47U	1	
				SUPPLIED FROM M.B.V.	C3031	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
					C3033	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
		CAPACITORS			C3034	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C1001	ECEA1EM101	E.CAPACITOR 25V 100U	1		C3036	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C1002	ECEA1CK101	E.CAPACITOR 16V 100U	1		C4001	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C1003	ECEA1JK330	E.CAPACITOR 6.3V 33U	1		C4002	ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C1004	ECEA1JK101	E.CAPACITOR 6.3V 100U	1		C4003	ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C2001	ECEA1JK220	E.CAPACITOR 6.3V 22U	1		C4005	ECQB1H123JH	P.CAPACITOR 50V 0.01U	1	
C2002	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		C4007	ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C2003	ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1		C4008	ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C2004	ECUM1H2232FN	C.CAPACITOR 50V 0.022U	1		C4009	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C2005	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1		C4010	ECEA1CK330	E.CAPACITOR 16V 33U	1	
C2006	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1		C4011	ECEA1CK470	E.CAPACITOR 16V 47U	1	
C2007	ECQV1H334J2	P.CAPACITOR 50V 0.33U	1		C4012	ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C2008	ECEA1CK100	E.CAPACITOR 16V 10U	1		C4013	ECEA16M33	E.CAPACITOR 16V 33U	1	
C2009, 10	ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2		C4014	ECQP1222J2	P.CAPACITOR 0.0022U	1	
C2011	ECUM1H471JCN	C.CAPACITOR 50V 470P	1		C4015	ECDD2H181J	C.CAPACITOR 500V 180P	1	
C2012	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1		C4016	ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C2013	ECEA1JK221	E.CAPACITOR 6.3V 220U	1		C4017	ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C2014	ECEA1CK100	E.CAPACITOR 16V 10U	1		C4018	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C2015	ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1		C4019	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2016	ECEA1JK220	E.CAPACITOR 6.3V 22U	1		C4020	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2017	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1		C4021	ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
C2018	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		C4022	ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2019	ECUM1H2232FN	C.CAPACITOR 50V 0.022U	1		C4023	ECEA1OM22	E.CAPACITOR 10V 22U	1	
C2020	ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1		C4024	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2021	ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1		C4025	ECEA16M10R	E.CAPACITOR 16V 10U	1	
C2022	ECQA0JM221	E.CAPACITOR 6.3V 220U	1		C4026	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2023	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1		C4027	ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C2024	ECQV1H683J2	P.CAPACITOR 50V 0.068U	1		C4028	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2501	ECEA1CK100	E.CAPACITOR 16V 10U	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4029	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C4030	ECUM1H1022FN	C. CAPACITOR CH 50V 1000P	1	
C4031	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C4032	ECQB1H102JH	P. CAPACITOR 50V 1000P	1	
C4033	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C4034, 35	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C4036	ECQV1H563JZ	P. CAPACITOR 50V 0.056U	1	
C4037	ECKP1H562KB	C. CAPACITOR 50V 5600P	1	
C4038	ECKP1H391KB	C. CAPACITOR 50V 390P	1	
C6001	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	1	
C6002	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C6003	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C6004	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C6005	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	1	
C6008	ECEA1HK3R3	E. CAPACITOR 50V 3.3U	1	
C6009	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C6010	ECEA1HK010	E. CAPACITOR 50V 1U	1	
C6501	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C6502	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C6503, 04	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	2	
C6505	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C6710	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C6711	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C7001	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C7002	ECEA0JK101	E. CAPACITOR 6.3V 100U	1	
C7701	ECA0JM471	E. CAPACITOR 6.3V 470U	1	
C7702	EECS5R5T224N	E. CAPACITOR 5.5V 0.22U	1	
		DIODES		
D1005	MA178	DIODE	1	
D2002-06	1SS254	DIODE	5	
D2501-04	1SS254	DIODE	4	
D2509	1SS254	DIODE	1	
D2511, 12	1SS254	DIODE	2	
D3002	1SS254	DIODE	1	
D4002, 03	1SS254	DIODE	2	
D6002-05	1SS254	DIODE	4	
D6501-04	1SS254	DIODE	4	
D6711	1SS254	DIODE	1	
D6712	MA723VT	DIODE	1 (VT)	
		CONNECTORS		
FE	VJS1141	CONNECTOR (FEMALE)	1	
		INTEGRATED CIRCUITS		
IC2501	NA3814K	IC	1	
IC2502	XRA6439P	IC	1	
IC2503	LM358PS	IC	1	
IC4001	XRA7766AS	IC	1	
IC6001	MN67434VRS	IC	1	
IC6501	BA6219B	IC	1	
IC6502	LM358PS	IC	1	
IC6710	M66006FP	IC	1	
		COILS		
L2001	ELESQ101KA	COIL 100UH	1	
L2501	ELESQ101KA	COIL 100UH	1	
L2503	VLP0125	COIL	1	
L3002	ELESQ101KA	COIL 100UH	1	
L3003	ELESQ120KA	COIL 12UH	1	
L3004	ELESQ101KA	COIL 100UH	1	
L3006	ELESQ5R6KA	COIL 5.6UH	1	
L3007	ELESQ6R8JA	COIL 6.8UH	1	
L3008	ELESQ101KA	COIL 100UH	1	
L4001	VLQEL07F153J	COIL 15MH	1	
L4002	ELESQ471KA	COIL 470UH	1	
L4003	ELESQ101KA	COIL 100UH	1	
L4004	VLQ0123	COIL	1	
L6001	VLP0074	COIL	1	
L6501	VLP0074	COIL	1	
L6701	ELESE101KA	COIL 100UH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L7002, 03	ELESQ101KA	COIL 100UH	2	
L7004	ELESQ1ROKA	COIL 1UH	1	
L7007	ELJFC1ROKB	COIL 1UH	1	
		CONNECTORS		
P202	VJS1237T	CONNECTOR (FEMALE)	1	
P1001	VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506	VJS1736T	CONNECTOR (FEMALE) 3P	1	
P2501	VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502	VJP1230T	CONNECTOR (MALE) 3P	1	
P2502	VJS1736T	CONNECTOR (FEMALE) 3P	1	
P2503	VJP1237T	CONNECTOR (MALE) 10P	1	
P2503	VJS1237T	CONNECTOR (FEMALE)	1	
P3001	VJS3193E014A	CONNECTOR (FEMALE)	1	
P3903	VJS1230	CONNECTOR (FEMALE) 3P	1	
P4002	VJP1230T	CONNECTOR (MALE) 3P	1	
P4002	VJS1230T	CONNECTOR (FEMALE)	1	
P4003	VJS2331	CONNECTOR (FEMALE) 6P	1	
P6001	VJS3193E013A	CONNECTOR (FEMALE)	1	
P6002	VJS3193E015A	CONNECTOR (FEMALE)	1	
P6004	VJP1230T	CONNECTOR (MALE) 3P	1	
P6004	VJS1230	CONNECTOR (FEMALE) 3P	1	
P6501	VJS3193E013A	CONNECTOR (FEMALE)	1	
		CONNECTOR (MALE)	1	
PP3001	VJP3044G009W	CONNECTOR (MALE)	1	
PP3002	VJP3044G012W	CONNECTOR (MALE)	1	
PP3003	VJP3044G006W	CONNECTOR (MALE)	1	
PP3004	VJP3043G011W	CONNECTOR (MALE)	1	
PP3005	VJP3043G009W	CONNECTOR (MALE)	1	
PP6707	VJP3043G010W	CONNECTOR (MALE)	1	
PP7001-03	VJP3043A005W	CONNECTOR (MALE) 5P	3	
PP7004	VJP3043A006W	CONNECTOR (MALE) 6P	1	
PP7005	VJP3043A004W	CONNECTOR (MALE) 4P	1	
		TRANSISTORS		
Q2001	MSD601	TRANSISTOR-RESISTOR	1	
Q2002, 03	MSB709	TRANSISTOR	2	
Q2004	MSD601	TRANSISTOR-RESISTOR	1	
Q2502	2SB1321-R	TRANSISTOR	1 (R, S)	
Q2504	MSB709	TRANSISTOR	1	
Q2505	MSD601	TRANSISTOR-RESISTOR	1	
Q2506	2SD1991	TRANSISTOR	1	
Q2507	2SD1991A	TRANSISTOR	1	
Q3001	MSB709-R	TRANSISTOR	1	
Q3002	MSD601-R	TRANSISTOR	1	
Q3003	MSC2295-B	TRANSISTOR	1	
Q3006	MSB710	TRANSISTOR	1	
Q3007	MSB710-R	TRANSISTOR	1 (R, S)	
Q4001	MSD602-R	TRANSISTOR	1	
Q4002	2SB1378-R	TRANSISTOR	1 (R, S)	
Q4004	2SD1991	TRANSISTOR	1	
Q4005	MSD601	TRANSISTOR-RESISTOR	1	
		COMBINATION PARTS		
QR1001	MRN1402	TRANSISTOR-RESISTOR	1	
QR2001	UN2116	TRANSISTOR-RESISTOR	1	
QR2002	XN1213	TRANSISTOR-TRANSISTOR	1	
QR2006, 07	MRN2404	TRANSISTOR-RESISTOR	2	
QR2008	UN2210	TRANSISTOR-RESISTOR	1	
QR2009	MRN2404	TRANSISTOR-RESISTOR	1	
QR2010	UN2210	TRANSISTOR-RESISTOR	1	
QR2013	MRN2404	TRANSISTOR-RESISTOR	1	
QR3005	MRN2402	TRANSISTOR-RESISTOR	1	
QR3007, 08	DTC363EK	COMBI. TR-R	2	
QR3009	MRN1404	TRANSISTOR-RESISTOR	1	
QR4001, 02	MRN1404	TRANSISTOR-RESISTOR	2	
QR4004	DTC363EK	COMBI. TR-R	1	
QR4005	MRN2404	TRANSISTOR-RESISTOR	1	
QR6005	MRN1404	TRANSISTOR-RESISTOR	1	
QR6501	XN1211	TRANSISTOR-RESISTOR	1	
QR6502	UN2216	TRANSISTOR-RESISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
QR6710	MRN2404	TRANSISTOR-RESISTOR	1		R3018	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
QR7701	MRN1402	TRANSISTOR-RESISTOR	1		R3025	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
					R3026	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
					R3027	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
		RESISTORS			R3028	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2002	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R3029	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1		R3030	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2004	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1		R3037	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2005	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1		R3038	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2008	ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1		R3040	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2009, 10	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R3041	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2011	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1		R3043	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R2012	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1		R4001	ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R2013	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1		R4003	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R2014	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1		R4004	ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R2015, 16	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R4005	ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R2018	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1		R4006	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R2019, 20	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R4007	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R2021	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1		R4008	ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R2024	ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1		R4010, 11	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R2025	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1		R4012	ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R2026	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1		R4013	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2029	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1		R4014	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R2034	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R4015	ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R2035	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1		R4016	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R2036	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		R4017	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037	ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1		R4019	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2038	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R4023	ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R2039	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1		R4024	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2040	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1		R4025	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R2501	ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1		R4027	ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R2502	ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1		R4028	ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R2503-05	ERDS2TJ150	C.RESISTOR 1/4W 15	3		R4029	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2506	ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1		R4030	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R2507	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		R4031	ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2508	EROS2CKG6800	M.RESISTOR 1/4W 680	1		R4032	ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R2509	ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1		R4033	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2510-12	ERDS2TJ560	C.RESISTOR 1/4W 56	3		R4034	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2513	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R4035	ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R2514	ERDS1TJ561	C.RESISTOR 1/2W 560	1		R4036	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2515	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1		R4037	ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R2516	ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1		R4038	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R2517	ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1		R4039	ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R2518	ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1		R4040	ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2519	ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1		R4041, 42	ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R2520	ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1		R4043	ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2521	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1		R4046	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R2522	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1		R6002, 03	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R2523	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1		R6004	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2524, 25	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2		R6005	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R2526	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1		R6006, 07	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R2527	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1		R6008	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2538, 39	ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2		R6013, 14	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R2542, 43	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2		R6015	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2544	ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1		R6021	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2545	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1		R6022, 23	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R2546	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1		R6024	ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R2551	ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1		R6028-30	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R2554	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		R6031	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2555, 56	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2		R6501	ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R2557	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R6502	ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R2558	ERJ6GMYG201	M.RESISTOR 1/10W 200	1		R6503	ERJ6GMYG112	M.RESISTOR CH 1/10W 1.1K	1	
R2560	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R6504	ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R2561, 62	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R6505	ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R2568	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R6506	VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R3001	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R6507	VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R3003	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1		R6508, 09	VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R3006	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1		R6510-12	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R3007	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R6513-15	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R3008	ERDS2TJ471	C.RESISTOR 1/4W 470	1		R6517	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R3009	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1		R6518	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R3013	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1		R6713	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3014	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R6714	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3015	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1		R6715-19	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	
R3016	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1		R6724	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6726	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		C2024	ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
R6728	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1		C2501	ECEA1CK100	E.CAPACITOR 16V 10U	1	
R7005	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		C2502	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
R7701	ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1		C2503-05	ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	
R7702	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		C2506	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
					C2507-09	ECEA1VKM4R7	E.CAPACITOR 35V 4.7U	3	
					C2510	ECUM1H4732FN	C.CAPACITOR CH 50V 0.047U	1	
		TRANSFORMERS			C2511	ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
T4001	E1Q7QF013Q	TRANSFORMER	1		C2512	ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
T4002	E1Q7QF012Q	I. F. TRANSFORMER	1		C2514	ECEA1CK101	E.CAPACITOR 16V 100U	1	
					C2515-17	ECEA1HKR2	E.CAPACITOR 50V 2.2U	3	
					C2518-21	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
		VARIABLE RESISTORS			C2522	ECUM1E2242FN	C.CAPACITOR CH 25V 0.22U	1	
VR2001	EVNDXAA00B54	V.RESISTOR 50K	1		C2523	ECUM1C1052FM	C.CAPACITOR CH 16V 1U	1	
VR2006	EVNDXAA00B15	V.RESISTOR 100K	1		C2524,25	ECEA1CK470	E.CAPACITOR 16V 47U	2	
VR2011	EVNDXAA00B15	V.RESISTOR 100K	1		C2526	ECA0JM221	E.CAPACITOR 6.3V 220U	1	
VR2018,19	EVNDXAA00B15	V.RESISTOR 100K	2		C2527	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
VR3012,13	EVNDXAA00B52	V.RESISTOR 500	2		C2528,29	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
VR4002	EVNDXAA00B25	V.RESISTOR 200K	1		C2530	ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
					C2531	ECUM1C4742FM	C.CAPACITOR CH 16V 0.47U	1	
		CRYSTAL OSCILLATORS			C2532,33	ECUM1C1052FN	C.CAPACITOR CH 16V 1U	2	
X6001	V5X0479	CRYSTAL OSCILLATOR	1		C2534,35	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
X7701	V5Q0565	CRYSTAL OSCILLATOR	1		C2536	ECUM1C4742FM	C.CAPACITOR CH 16V 0.47U	1	
					C2555	ECEA1CK101	E.CAPACITOR 16V 100U	1	
					C2556	ECUM1C1052FM	C.CAPACITOR CH 16V 1U	1	
		MISCELLANEOUS			C2557	ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
	VWJ0749	FLAT CARD CABLE	1 (P6501-P1505)		C2558	ECUM1C1052FM	C.CAPACITOR CH 16V 1U	1	
	VWJ15HW260MM	FLAT CARD CABLE	1 (P2501-P1507)		C2559	ECEA1AK330	E.CAPACITOR 10V 33U	1	
	VWJ14AW335MM	FLAT CARD CABLE	1 (P3001-P501)		C3001	ECA0JM471	E.CAPACITOR 6.3V 470U	1	
	VWJ13HW105MM	FLAT CARD CABLE	1 (P1001-P1102)		C3003	ECUM1C1052FN	C.CAPACITOR CH 16V 1U	1	
	VWJ131W140BB	FLAT CARD CABLE	1 (P6001-P7501)		C3004	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
	VWJ150W140BB	FLAT CARD CABLE	1 (P6002-P7502)		C3005	ECEA1CK470	E.CAPACITOR 16V 47U	1	
	VEEB471	FLAT CARD CABLE	1 (P6004-P3903)		C3006,07	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	2	
	VEEB284	FLAT CARD CABLE	1 (P4002-FE HEAD)		C3011	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
	VEEB285	FLAT CARD CABLE	1 (P2503-P202)		C3012	ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
	VEEB286	FLAT CARD CABLE	1 (P2502-P1508)		C3013	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
					C3015	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
					C3016	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
					C3018	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
					C3019	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
					C3020	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
					C3021	ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
					C3022	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
					C3023	ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
					C3026	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
	VEP03971K	MAIN C.B.A.	(RTL)NV-SD40B		C3029	ECEA1CK470	E.CAPACITOR 16V 47U	1	
			SUPPLIED FROM M.B.V.		C3030	ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
					C3031	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
		CAPACITORS			C3033	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C1001	ECA1EM101	E.CAPACITOR 25V 100U	1		C3034	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C1002	ECEA1CK101	E.CAPACITOR 16V 100U	1		C3036	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C1003	ECEA0JK330	E.CAPACITOR 6.3V 33U	1		C4001	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C1004	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1		C4002	ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C2001	ECEA0JK220	E.CAPACITOR 6.3V 22U	1		C4003	ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C2002	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		C4005	ECQB1H123JH	P.CAPACITOR 50V 0.01U	1	
C2003	ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1		C4007	ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C2004	ECUM1H2232FN	C.CAPACITOR 6.3V 0.022U	1		C4008	ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C2005	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1		C4009	ECEA1HKO10	E.CAPACITOR 50V 1U	1	
C2006	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1		C4010	ECEA1CK330	E.CAPACITOR 16V 33U	1	
C2007	ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1		C4011	ECEA1CK470	E.CAPACITOR 16V 47U	1	
C2008	ECEA1CK100	E.CAPACITOR 16V 10U	1		C4012	ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C2009,10	ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2		C4013	ECEA16M33	E.CAPACITOR 16V 33U	1	
C2011	ECUM1H471JCN	C.CAPACITOR 50V 470P	1		C4014	ECQP1222JZ	P.CAPACITOR 0.0022U	1	
C2012	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1		C4015	ECCD2H181J	C.CAPACITOR 500V 180P	1	
C2013	ECEA0JK221	E.CAPACITOR 6.3V 220U	1		C4016	ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C2014	ECEA1CK100	E.CAPACITOR 16V 10U	1		C4017	ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C2015	ECEA1HKR3	E.CAPACITOR 50V 3.3U	1		C4018	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C2016	ECEA0JK220	E.CAPACITOR 6.3V 22U	1		C4019	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2017	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1		C4020	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2018	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		C4021	ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
C2019	ECUM1H2232FN	C.CAPACITOR 50V 0.022U	1		C4022	ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2020	ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1		C4023	ECEA10M22	E.CAPACITOR 10V 22U	1	
C2021	ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1		C4024	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2022	ECA0JM221	E.CAPACITOR 6.3V 220U	1		C4025	ECEA16M10R	E.CAPACITOR 16V 10U	1	
C2023	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1		C4026	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4027	ECQB1H822K2	P. CAPACITOR 50V 8200P	1	
C4028	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4029	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C4030	ECUM1H102ZFN	C. CAPACITOR CH 50V 1000P	1	
C4031	ECEAQJ470	E. CAPACITOR 6.3V 47U	1	
C4032	ECQB1H102JH	P. CAPACITOR 50V 1000P	1	
C4033	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4034, 35	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C4036	ECQV1H563JZ	P. CAPACITOR 50V 0.056U	1	
C4037	ECKF1H562KB	C. CAPACITOR 50V 5600P	1	
C6001	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	1	
C6002	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C6003	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C6004	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6005	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	1	
C6008	ECEA1HK3R3	E. CAPACITOR 50V 3.3U	1	
C6009	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6010	ECEA1HK010	E. CAPACITOR 50V 1U	1	
C6501	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6502	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C6503, 04	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C6505	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6710	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6711	ECEAQJ470	E. CAPACITOR 6.3V 47U	1	
C7001	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7004	ECEA1CKS100	E. CAPACITOR 16V 10U	1	
C7005	ECKF1H471KB	C. CAPACITOR 50V 470P	1	
C7701	ECAQJH471	E. CAPACITOR 6.3V 470U	1	
C7702	EBCS5R5T224N	E. CAPACITOR 5.5V 0.22U	1	
		DIODES		
D1005	MA178	DIODE	1	
D2002-06	1SS254	DIODE	5	
D2501-04	1SS254	DIODE	4	
D2509	1SS254	DIODE	1	
D2511, 12	1SS254	DIODE	2	
D3002	1SS254	DIODE	1	
D4002, 03	1SS254	DIODE	2	
D6002-05	1SS254	DIODE	4	
D6501-04	1SS254	DIODE	4	
D6711	1SS254	DIODE	1	
D6712	MA723VT	DIODE	1 (VT)	
		CONNECTORS		
FE	VJS1141	CONNECTOR (FEMALE)	1	
		INTEGRATED CIRCUITS		
IC2501	NA3814K	IC	1	
IC2502	XRA6439P	IC	1	
IC2503	LM358PS	IC	1	
IC4001	XRA7766AS	IC	1	
IC6001	MN67434VRS	IC	1	
IC6501	BA6219B	IC	1	
IC6502	LM358PS	IC	1	
IC6710	M66006FP	IC	1	
		COILS		
L2001	ELESQ101KA	COIL 100UH	1	
L2501	ELESQ101KA	COIL 100UH	1	
L3002	ELESQ101KA	COIL 100UH	1	
L3003	ELESQ120KA	COIL 12UH	1	
L3004	ELESQ101KA	COIL 100UH	1	
L3006	ELESQ5R6KA	COIL 5.6UH	1	
L3007	ELESQ6R8JA	COIL 6.8UH	1	
L3008	ELESQ101KA	COIL 100UH	1	
L4001	VLQEL07F153J	COIL 15MH	1	
L4002	ELESQ471KA	COIL 470UH	1	
L4003	ELESQ101KA	COIL 100UH	1	
L4004	VLQ0123	COIL	1	
L6001	VLPO074	COIL	1	
L6501	VLPO074	COIL	1	
		COILS		
L6701	ELESE101KA	COIL 100UH	1	
L7002	ELESQ101KA	COIL 100UH	1	
L7004	ELESQ101KA	COIL 1UH	1	
L7005	ELJPA470KB	COIL 47UH	1	
L7007	ELJFC1R0KB	COIL 1UH	1	
		CONNECTORS		
P202	VJS1237T	CONNECTOR (FEMALE)	1	
P1001	VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506	VJS1736T	CONNECTOR (FEMALE) 3P	1	
P2501	VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502	VJP1230T	CONNECTOR (MALE)	3P	1
P2502	VJS1736T	CONNECTOR (FEMALE) 3P	1	
P2503	VJP1237T	CONNECTOR (MALE) 10P	1	
P2503	VJS1237T	CONNECTOR (FEMALE)	1	
P3001	VJS3193E014A	CONNECTOR (FEMALE)	1	
P3903	VJS1230	CONNECTOR (FEMALE) 3P	1	
P4002	VJP1230T	CONNECTOR (MALE) 3P	1	
P4002	VJS1230T	CONNECTOR (FEMALE)	1	
P4003	VJS2331	CONNECTOR (FEMALE) 6P	1	
P6001	VJS3193E013A	CONNECTOR (FEMALE)	1	
P6002	VJS3193E015A	CONNECTOR (FEMALE)	1	
P6004	VJP1230T	CONNECTOR (MALE) 3P	1	
P6004	VJS1230	CONNECTOR (FEMALE) 3P	1	
P6501	VJS3193E013A	CONNECTOR (FEMALE)	1	
PP3001	VJP3044G009W	CONNECTOR (MALE)	1	
PP3002	VJP3044G012W	CONNECTOR (MALE)	1	
PP3003	VJP3044G006W	CONNECTOR (MALE)	1	
PP3004	VJP3043G011W	CONNECTOR (MALE)	1	
PP3005	VJP3043G009W	CONNECTOR (MALE)	1	
PP6707	VJP3043G010W	CONNECTOR (MALE)	1	
PP7001-03	VJP3043A005W	CONNECTOR (MALE) 5P	3	
PP7004	VJP3043A006W	CONNECTOR (MALE) 6P	1	
PP7005	VJP3043A004W	CONNECTOR (MALE) 4P	1	
		TRANSISTORS		
Q2001	MSD601	TRANSISTOR-RESISTOR	1	
Q2002, 03	MSB709	TRANSISTOR	2	
Q2004	MSD601	TRANSISTOR-RESISTOR	1	
Q2502	2SB1321-R	TRANSISTOR	1 (R, S)	
Q2504	MSB709	TRANSISTOR	1	
Q2505	MSD601	TRANSISTOR-RESISTOR	1	
Q2506	2SD1991	TRANSISTOR	1	
Q2507	2SD1991A	TRANSISTOR	1	
Q3001	MSB709-R	TRANSISTOR	1	
Q3002	MSD601-R	TRANSISTOR	1	
Q3003	MSC2295-B	TRANSISTOR	1	
Q3006	MSB710	TRANSISTOR	1	
Q3007	MSB710-R	TRANSISTOR	1 (R, S)	
Q4001	MSD602-R	TRANSISTOR	1	
Q4002	2SB1378-R	TRANSISTOR	1 (R, S)	
Q4004	2SD1991	TRANSISTOR	1	
Q4005	MSD601	TRANSISTOR-RESISTOR	1	
		COMBINATION PARTS		
QR1001	MRN1402	TRANSISTOR-RESISTOR	1	
QR2001	UN2116	TRANSISTOR-RESISTOR	1	
QR2002	XN1213	TRANSISTOR-TRANSISTOR	1	
QR2006, 07	MRN2404	TRANSISTOR-RESISTOR	2	
QR2008	UN2210	TRANSISTOR-RESISTOR	1	
QR2009	MRN2404	TRANSISTOR-RESISTOR	1	
QR2010	UN2210	TRANSISTOR-RESISTOR	1	
QR2013	MRN2404	TRANSISTOR-RESISTOR	1	
QR3005	MRN2402	TRANSISTOR-RESISTOR	1	
QR3007, 08	DTC363EK	COMBI. TR-R	2	
QR4001, 02	MRN1404	TRANSISTOR-RESISTOR	2	
QR4004	DTC363EK	COMBI. TR-R	1	
QR4005	MRN2404	TRANSISTOR-RESISTOR	1	
QR6005	MRN1404	TRANSISTOR-RESISTOR	1	
QR6501	XN1211	TRANSISTOR-RESISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
QR6502	UN2216	TRANSISTOR-RESISTOR	1		R3016	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
QR7701	MN1402	TRANSISTOR-RESISTOR	1		R3018	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
					R3025	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
					R3026	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
					R3027	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
		RESISTORS			R3028	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2002	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R3029	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1		R3030	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2004	ERJ6GMYJ000	M.RESISTOR CH 1/10W 0	1		R3037	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2005	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1		R3038	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2008	ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1		R3040	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2009,10	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R3041	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2011	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1		R3043	ERJ6GMYJ20R00	M.RESISTOR CH 1/10W 0	1	
R2012	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1		R4001	ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R2013	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1		R4003	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R2014	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1		R4004	ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R2015,16	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R4005	ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R2018	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1		R4006	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R2019,20	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R4007	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R2021	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1		R4008	ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R2024	ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1		R4010,11	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R2025	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1		R4012	ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R2026	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1		R4013	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2029	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1		R4014	ERJ6GMYJ20R00	M.RESISTOR CH 1/10W 0	1	
R2034	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R4015	ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R2035	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1		R4016	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R2036	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		R4017	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037	ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1		R4019	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2038	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R4023	ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R2039	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1		R4024	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2040	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1		R4025	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R2501	ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1		R4027	ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R2502	ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1		R4028	ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R2503-05	ERDS2TJ150	C.RESISTOR 1/4W 15	3		R4029	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2506	ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1		R4030	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R2507	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		R4031	ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2508	EROS2CKG6800	M.RESISTOR 1/4W 680	1		R4032	ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R2509	ERX12SJ47	M.RESISTOR CH 1/2W 0.47	1		R4033	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2510-12	ERDS2TJ560	C.RESISTOR 1/4W 56	3		R4034	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2513	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R4035	ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R2514	ERDS1TJ561	C.RESISTOR 1/2W 560	1		R4036	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2515	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1		R4037	ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R2516	ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1		R4038	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R2517	ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1		R4039	ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R2518	ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1		R4040	ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2519	ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1		R4041,42	ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R2520	ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1		R4043	ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2521	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1		R4046	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R2522	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1		R6002,03	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R2523	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1		R6004	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2524,25	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2		R6005	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R2526	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1		R6006,07	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R2527	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1		R6008	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2538,39	ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2		R6013,14	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R2542,43	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2		R6015	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2544	ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1		R6021	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2545	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1		R6022,23	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R2546	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1		R6024	ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R2551	ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1		R6028-30	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R2554	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		R6031	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2555,56	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2		R6501	ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R2557	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R6502	ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R2558	ERJ6GMYG201	M.RESISTOR 1/10W 200	1		R6503	ERJ6GMYG112	M.RESISTOR CH 1/10W 1.1K	1	
R2560	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R6504	ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R2561,62	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2		R6505	ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R2568	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R6506	VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R3001	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R6507	VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R3003	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1		R6508,09	VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R3006	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1		R6510-12	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R3007	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		R6513-15	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R3008	ERDS2TJ471	C.RESISTOR 1/4W 470	1		R6517	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R3009	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1		R6518	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R3013	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1		R6712	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3014	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		R6713	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015	ERJ6GMYJ000	M.RESISTOR CH 1/10W 0	1		R6714	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6715-19	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5		IC3101	BA7004	IC	1	
R6724	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		IC3901	LA7150	IC	1	
R6726	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		IC3902	UPD4066BG	IC	1	
R6728	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1						
R7005	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1				CONNECTORS		
R7701	ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1						
R7702	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1		JK3906	VJS1469	CONNECTOR (FEMALE)	1	
		TRANSFORMERS							
T4001	EIQ7QF013Q	TRANSFORMER	1				COILS		
T4002	EIQ7QF012Q	I. F. TRANSFORMER	1		L3101	ELESQ101KA	COIL 100UH	1	
					L3901	ELESQ2R7KA	COIL 2.7UH	1	
					L3903	ELESQ1R0KA	COIL 1UH	1	
					L3905	ELESQ101KA	COIL 100UH	1	
		VARIABLE RESISTORS							
VR2001	EVNDXAA00B54	V.RESISTOR 50K	1				CONNECTORS		
VR2006	EVNDXAA00B15	V.RESISTOR 100K	1		PS3901	VJS3043F009W	CONNECTOR (FEMALE)	1	
VR2011	EVNDXAA00B15	V.RESISTOR 100K	1		PS3902	VJS3043F011W	CONNECTOR (FEMALE)	1	
VR2018,19	EVNDXAA00B15	V.RESISTOR 100K	2						
VR3012,13	EVNDXAA00B52	V.RESISTOR 500	2						
VR4002	EVNDXAA00B25	V.RESISTOR 200K	1				TRANSISTORS		
		CRYSTAL OSCILLATORS			Q3101	2SC3311	TRANSISTOR	1	
X6001	VSX0479	CRYSTAL OSCILLATOR	1		Q3901	2SB1320	TRANSISTOR	1	
X7701	VSQ0565	CRYSTAL OSCILLATOR	1						
							COMBINATION PARTS		
		MISCELLANEOUS			QR3901	MRN2404	TRANSISTOR-RESISTOR	1	
	VWJ0749	FLAT CARD CABLE	1 (P6501-P1505)				RESISTORS		
	VWJ15HW260MM	FLAT CARD CABLE	1 (P2501-P1507)		R3101	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
	VWJ14AW335MM	FLAT CARD CABLE	1 (P3001-P501)		R3102	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
	VWJ13HW105MM	FLAT CARD CABLE	1 (P1001-P1102)		R3103,04	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
	VWJ131W140BB	FLAT CARD CABLE	1 (P6001-P7501)		R3105	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
	VWJ150W140BB	FLAT CARD CABLE	1 (P6002-P7502)		R3901	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
	VEE8471	FLAT CARD CABLE	1 (P6004-P3903)		R3902	ERDS2TJ750	C.RESISTOR 1/4W 75	1	
	VEE8284	FLAT CARD CABLE	1 (P4002-FE HEAD)		R3903,04	ERJ6GEYJ242	M.RESISTOR CH 1/10W 2.4K	2	
	VEE8285	FLAT CARD CABLE	1 (P2503-P202)		R3905	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
	VEE8286	FLAT CARD CABLE	1 (P2502-P1508)		R3906	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
					R3907	ERJ6GEYJ912	M.RESISTOR CH 1/10W 9.1K	1	
					R3908,09	ERDS2TJ151	C.RESISTOR 1/4W 150	2	
					R3910	ERDS2TJ471	C.RESISTOR 1/4W 470	1	
					R3918	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
					R3923	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
					R3924	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
					R3925	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
	■ VEPO3973B	INPUT/OUTPUT PACK C.B.A.	(RTL)NV-SD30EG		R3928	ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
			SUPPLIED FROM M.B.V.		R3929,30	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	2	
		CAPACITORS					SWITCHES		
C3101,02	ECEA1CK470	E.CAPACITOR 16V 47U	2		SW3901	ESD172211	SWITCH	1	
C3103,04	ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	2						
C3105	ECEA1CK100	E.CAPACITOR 16V 10U	1						
C3901,02	ECEA1CK330	E.CAPACITOR 16V 33U	2						
C3903	ECEA1HK010	E.CAPACITOR 50V 1U	1				CRYSTAL OSCILLATORS		
C3904-06	ECEA1CK470	E.CAPACITOR 16V 47U	3		X3101	VSX0099	CRYSTAL OSCILLATOR	1	
C3907,08	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2						
C3909	ECEA1HGR47	E.CAPACITOR 50V 0.47U	1						
C3911	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1				MISCELLANEOUS		
C3912	ECUM1H471JCN	C.CAPACITOR 50V 470P	1			VEJ1336	JACK PLATE	1	
C3922	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1						
C3925	ECEA05KJ471	E.CAPACITOR 5V 470U	1						
C3931	ECEA0JK470	E.CAPACITOR 6.3V 47U	1						
C3932	ECEA1HGR47	E.CAPACITOR 50V 0.47U	1						
C3933-35	ECEA1CKN100	E.CAPACITOR 16V 10U	3						
		DIODES							
D3101	1SS254	DIODE	1			■ VEPO3973D	INPUT/OUTPUT PACK C.B.A.	(RTL)NV-SD30B	
D3901,02	1SS254	DIODE	2					SUPPLIED FROM M.B.V.	
D3905,06	1SS254	DIODE	2						
							CAPACITORS		
					C3101,02	ECEA1CK470	E.CAPACITOR 16V 47U	2	
		INTEGRATED CIRCUITS			C3103,04	ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3105	ECEA1CK100	E.CAPACITOR 16V 10U	1						SUPPLIED FROM M.B.V.
C3901,02	ECEA1CK330	E.CAPACITOR 16V 33U	2						
C3903	ECEA1HK010	E.CAPACITOR 50V 1U	1				CAPACITORS		
C3904-06	ECEA1CK470	E.CAPACITOR 16V 47U	3		C3101,02	ECEA1CK470	E.CAPACITOR 16V 47U	2	
C3907,08	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2		C3103,04	ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	2	
C3909	ECEA1HKR47	E.CAPACITOR 50V 0.47U	1		C3105	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3911	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1		C3901,02	ECEA1CK330	E.CAPACITOR 16V 33U	2	
C3912	ECUM1H471JCN	C.CAPACITOR 50V 470P	1		C3903	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3922	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1		C3904-06	ECEA1CK470	E.CAPACITOR 16V 47U	3	
					C3907,08	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
		DIODES			C3909	ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
D3101	1SS254	DIODE	1		C3911	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
D3901,02	1SS254	DIODE	2		C3912	ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
					C3920	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
		INTEGRATED CIRCUITS			C3922	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
IC3101	BA7004	IC	1		C3925	ECEA05KJ471	E.CAPACITOR 5V 470U	1	
IC3901	LA7150	IC	1		C3926-28	ECEA1CK100	E.CAPACITOR 16V 10U	3	
					C3929	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
		CONNECTORS			C3931	ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
JK3906	VJS1469	CONNECTOR (FEMALE)	1		C3932	ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
					C3933-35	ECEA1CKN100	E.CAPACITOR 16V 10U	3	
		COILS							
L3101	ELESQ101KA	COIL 100UH	1				DIODES		
L3901	ELESQ2R7KA	COIL 2.7UH	1		D3101	1SS254	DIODE	1	
					D3901,02	1SS254	DIODE	2	
		CONNECTORS			D3905,06	1SS254	DIODE	2	
PS3901	VJS3043F009W	CONNECTOR (FEMALE)	1		D3910-13	MA165VT	DIODE	4	
PS3902	VJS3043F011W	CONNECTOR (FEMALE)	1						
							INTEGRATED CIRCUITS		
		TRANSISTORS			IC3101	BA7004	IC	1	
Q3101	2SC3311	TRANSISTOR	1		IC3901	LA7150	IC	1	
					IC3902	UPD4066BG	IC	1	
		RESISTORS			IC3903	UPD4053BG	IC	1	
R3101	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1				CONNECTORS		
R3102	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1		JK3906	VJS1469	CONNECTOR (FEMALE)	1	
R3103,04	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2						
R3105	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1				COILS		
R3901	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1		L3101	ELESQ101KA	COIL 100UH	1	
R3902	ERDS2TJ750	C.RESISTOR 1/4W 75	1		L3901	ELESQ2R7KA	COIL 2.7UH	1	
R3903,04	ERJ6GEYJ242	M.RESISTOR CH 1/10W 2.4K	2		L3903	ELESQ1R0KA	COIL 1UH	1	
R3905	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1		L3905	ELESQ101KA	COIL 100UH	1	
R3906	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1						
R3907	ERJ6GEYJ912	M.RESISTOR CH 1/10W 9.1K	1				CONNECTORS		
R3908,09	ERDS2TJ151	C.RESISTOR 1/4W 150	2		P3903	VJP1243	CONNECTOR (MALE) 3P	1	
R3918	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1						
R3925	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1		PS3901	VJS3043F009W	CONNECTOR (FEMALE)	1	
R3928	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1		PS3902	VJS3043F011W	CONNECTOR (FEMALE)	1	
		SWITCHES					TRANSISTORS		
SW3901	ESD172211	SWITCH	1		Q3101	2SC3311	TRANSISTOR	1	
					Q3901	2SB1320	TRANSISTOR	1	
		CRYSTAL OSCILLATORS							
X3101	VSX0099	CRYSTAL OSCILLATOR	1				COMBINATION PARTS		
					QR3901	MRN2404	TRANSISTOR-RESISTOR	1	
		MISCELLANEOUS							
	VEJ1336	JACK PLATE	1				RESISTORS		
					R3101	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
					R3102	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
					R3103,04	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
					R3105	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
					R3901	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
					R3902	ERDS2TJ750	C.RESISTOR 1/4W 75	1	
					R3903,04	ERJ6GEYJ242	M.RESISTOR CH 1/10W 2.4K	2	
					R3905	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
					R3906	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
	VEPO3973A	INPUT/OUTPUT PACK C.B.A.		(RTL)NV-SD40EG					

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3907	ERJ6GEYJ912	M.RESISTOR CH 1/10W 9.1K	1		L3901	ELESQ2R7KA	COIL 2.7UH	1	
R3908,09	ERDS2TJ151	C.RESISTOR 1/4W 150	2						
R3910	ERDS2TJ471	C.RESISTOR 1/4W 470	1				CONNECTORS		
R3911	ERJ6GEYJ433	M.RESISTOR CH 1/10W 43K	1		P3903	VJP1243	CONNECTOR (MALE) 3P	1	
R3912	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1						
R3913	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1						
R3917	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		PS3901	VJS3043FO09W	CONNECTOR (FEMALE)	1	
R3918	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1		PS3902	VJS3043FO11W	CONNECTOR (FEMALE)	1	
R3919	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1						
R3920	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1				TRANSISTORS		
R3923	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1		Q3101	2SC3311	TRANSISTOR	1	
R3924	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1						
R3925	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1						
R3926	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1				RESISTORS		
R3928	ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1		R3101	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3929,30	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	2		R3102	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3931,32	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	2		R3103,04	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
					R3105	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
		SWITCHES			R3901	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
SW3901	ESD172211	SWITCH	1		R3902	ERDS2TJ750	C.RESISTOR 1/4W 75	1	
					R3903,04	ERJ6GEYJ242	M.RESISTOR CH 1/10W 2.4K	2	
		CRYSTAL OSCILLATORS			R3905	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
X3101	VSX0099	CRYSTAL OSCILLATOR	1		R3906	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
					R3907	ERJ6GEYJ912	M.RESISTOR CH 1/10W 9.1K	1	
					R3908,09	ERDS2TJ151	C.RESISTOR 1/4W 150	2	
		MISCELLANEOUS			R3911	ERJ6GEYJ433	M.RESISTOR CH 1/10W 43K	1	
	VEJ1338	JACK PLATE	1		R3912	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
					R3913	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
					R3917	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
					R3918	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
					R3919	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
					R3920	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
					R3925	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
					R3926	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
					R3928	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
	VEPO3973C	INPUT/OUTPUT PACK C.B.A.		(RTL)NV-SD40B	R3931,32	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	2	
				SUPPLIED FROM M.B.V.					
		CAPACITORS					SWITCHES		
C3101,02	ECEA1CK470	E.CAPACITOR 16V 47U	2		SW3901	ESD172211	SWITCH	1	
C3103,04	ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	2						
C3105	ECEA1CK100	E.CAPACITOR 16V 10U	1						
C3901,02	ECEA1CK330	E.CAPACITOR 16V 33U	2				CRYSTAL OSCILLATORS		
C3903	ECEA1HK010	E.CAPACITOR 50V 1U	1		X3101	VSX0099	CRYSTAL OSCILLATOR	1	
C3904-06	ECEA1CK470	E.CAPACITOR 16V 47U	3						
C3907,08	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2						
C3909	ECEA1HGR47	E.CAPACITOR 50V 0.47U	1				MISCELLANEOUS		
C3911	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1			VEJ1338	JACK PLATE	1	
C3912	ECUM1H471JCN	C.CAPACITOR 50V 470P	1						
C3920	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1						
C3922	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1						
C3926-28	ECEA1CK100	E.CAPACITOR 16V 10U	3						
C3929	ECEA1CKS100	E.CAPACITOR 16V 10U	1						
		DIODES							
D3101	1SS254	DIODE	1			VEPO3A01A1PE	LUMINANCE & CHROMINANCE		(RTL)NV-SD30EG
D3901,02	1SS254	DIODE	2				PACK C.B.A.		SUPPLIED FROM M.B.V.
D3910-13	MA165VT	DIODE	4						
							CAPACITORS		
		INTEGRATED CIRCUITS			C301	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
IC3101	BA7004	IC	1		C302	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
IC3901	1A7150	IC	1		C303,04	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	2	
IC3903	UPD4053BG	IC	1		C305,06	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	2	
					C307	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
					C308	ECUX1H560JCV	C.CAPACITOR 50V 56P	1	
		CONNECTORS			C309	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
JK3906	VJS1469	CONNECTOR (FEMALE)	1		C310	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
					C311	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1	
					C312	ECUX1H270JCV	C.CAPACITOR 50V 27P	1	
		COILS			C313	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
L3101	ELESQ101KA	COIL 100UH	1		C314	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C315	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1						
C316	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	1						
C317	ECEA1EKN4R7	E. CAPACITOR 25V 4.7U	1				COILS		
C318	ECEA1HK2R2	E. CAPACITOR 50V 2.2U	1		L301	VLQEL05S330K	COIL 33UH	1	
C319	ECEA1HKA3R3	E. CAPACITOR 50V 3.3U	1		L302,03	VLQEL05S390K	COIL 39UH	2	
C320	ECUM1H223KBN	C. CAPACITOR CH 50V 0.022U	1		L304	ELESE101KA	COIL 100UH	1	
C321	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	1		L306	VLQEL05S820J	COIL 82UH	1	
C322	ECUX1H333KBV	C. CAPACITOR CH 50V 0.033U	1		L307	ELESE101KA	COIL 100UH	1	
C323	ECEA1CKA100	E. CAPACITOR 16V 10U	1		L308	VLQEL05S390K	COIL 39UH	1	
C324,25	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	2		L802	VLQEL05S101K	COIL 100UH	1	
C326	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1		L803	ELESE270KA	COIL 27UH	1	
C327	ECEA1CKA100	E. CAPACITOR 16V 10U	1		L805	VLQEL05S150K	COIL 15UH	1	
C328	ECUX1H821JCV	C. CAPACITOR 50V 820P	1		L808	ELESEN6R8JA	COIL 6.8UH	1	
C329	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1		L809-11	ELESE101KA	COIL 100UH	3	
C330	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1		L813	ELESE101KA	COIL 100UH	1	
C331	ECUX1H560JCV	C. CAPACITOR 50V 56P	1						
C332	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1				CONNECTORS		
C333	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	1		PS301	VJS3044F009W	CONNECTOR (FEMALE)	1	
C334	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	1		PS302	VJS3044F012W	CONNECTOR (FEMALE)	1	
C336	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1		PS303	VJS3044F006W	CONNECTOR (FEMALE)	1	
C337	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1						
C338,39	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	2				TRANSISTORS		
C340	ECUX1H2232FV	C. CAPACITOR 50V 0.022U	1		Q301	2SC3930	TRANSISTOR	1	
C341	ECUX1H470JCV	C. CAPACITOR 50V 47P	1		Q302	2SB1218A	TRANSISTOR	1	
C342	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1		Q802	2SD1819A	TRANSISTOR	1	
C801-05	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	5		Q804	2SC3930	TRANSISTOR	1	
C806	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1						
C808	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	1						
C811	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1				COMBINATION PARTS		
C813	ECUX1H181JCV	C. CAPACITOR 50V 180P	1		QR807	UN5213	TRANSISTOR-RESISTOR	1	
C814	ECUX1H270JCV	C. CAPACITOR 50V 27P	1						
C815	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	1						
C817	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1				RESISTORS		
C839	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	1		R301	ERJ3GEYJ102	M. RESISTOR 1/16W 1K	1	
C840	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1		R302	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
C841	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1		R303,04	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	2	
C842	ECQV1H104J2	P. CAPACITOR 50V 0.1U	1		R305,06	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
C843	ECUX1H2232FV	C. CAPACITOR 50V 0.022U	1		R307	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
C844	ECQV1H104J2	P. CAPACITOR 50V 0.1U	1		R308,09	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
C845	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1		R310	ERJ6GEYJ125	M. RESISTOR CH 1/10W 1.2M	1	
C846	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1		R311	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
C847	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1		R316,17	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	2	
C848	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	1		R319	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
C849	ECUX1H102KBV	C. CAPACITOR 50V 1000P	1		R320	ERJ3GEYJ102	M. RESISTOR 1/16W 1K	1	
C850	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1		R321	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
C851	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1		R322	ERJ3GEYJ822	M. RESISTOR CH 1/16W 8.2K	1	
C852	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1		R325	ERJ3GEYJ332	M. RESISTOR 1/16W 3.3K	1	
C853	ECUX1H180JCV	C. CAPACITOR 50V 18P	1		R328	ERJ3GEYJ102	M. RESISTOR 1/16W 1K	1	
C854	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1		R329	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
C855	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1		R331,32	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
C856	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1		R333	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
C857	ECQV1H104J2	P. CAPACITOR 50V 0.1U	1		R334,35	ERJ3GEYJ152	M. RESISTOR 1/16W 1.5K	2	
C858	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1		R337	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
C859	ECEA1HKAR33	E. CAPACITOR 50V 0.33U	1		R338	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
C860	ECUX1H333KBV	C. CAPACITOR CH 50V 0.033U	1		R380	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
C861	ECEA1HKA010	E. CAPACITOR 50V 1U	1		R396	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
C862	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1		R801	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
C868	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1		R802	ERJ3GEYJ332	M. RESISTOR 1/16W 3.3K	1	
C891,92	ECUX1H2232FV	C. CAPACITOR 50V 0.022U	2		R803	ERJ3GEYJ102	M. RESISTOR 1/16W 1K	1	
					R804	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
		DIODES			R805	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
D303,04	MA141K	DIODE	2		R809	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
D307	1SS283	DIODE	1		R811	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
D310	MA141K	DIODE	1		R812	ERJ3GEYJ102	M. RESISTOR 1/16W 1K	1	
D381	MA165	DIODE	1		R813,14	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	2	
					R815	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
					R826	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
		DELAYS			R827	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
DL802	EFDBR124A53T	DELAY	1		R835	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
					R836	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
					R837	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
		INTEGRATED CIRCUITS			R838	ERJ6GEYF271	M. RESISTOR CH 1/10W 270	1	
IC301	MSM7403MS	IC	1		R839	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
IC302	TDA9715	IC	1	SUPPLIED FROM M.B.V.					

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R840	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		C821, 22	ECUX1H560JCV	C.CAPACITOR 50V 56P	2	
R843	ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1		C823, 24	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	2	
R853	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		C825	ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
R855	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		C826-31	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	6	
R856	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1		C832	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
					C833	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
					C834	ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
		VARIABLE RESISTORS			C835	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
VR301	EVMEASAO0B13	V.RESISTOR	1		C836	ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
VR302	EVMEASAO0B14	V.RESISTOR	1		C837	ECQB1H332JH	P.CAPACITOR 50V 3300P	1	
VR303, 04	EVMEASAO0B53	V.RESISTOR	2		C838	ECUX1H331JCV	C.CAPACITOR 50V 330P	1	
VR305, 06	EVMEASAO0B14	V.RESISTOR	2		C839	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
					C840	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
					C841	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
		CRYSTAL OSCILLATORS			C842	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
X801	VSX0162	CRYSTAL OSCILLATOR	1		C843	ECUX1H2232FV	C.CAPACITOR 50V 0.022U	1	
					C844	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
					C845	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
					C846	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
					C847	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
					C848	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
					C849	ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
					C850	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
	VEPO3A01BPE	LUMINANCE & CHROMINANCE		(RTL)NV-SD30B	C851	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
		PACK C.B.A.		SUPPLIED FROM M.B.V.	C852	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
					C853	ECUX1H180JCV	C.CAPACITOR 50V 18P	1	
					C854	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
					C855	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
		CAPACITORS			C856	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C301	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1		C857	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C302	ECEA1CKA100	E.CAPACITOR 16V 10U	1		C858	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C303, 04	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	2		C859	ECEA1HKA33	E.CAPACITOR 50V 0.33U	1	
C305, 06	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	2		C860	ECUX1H333KBV	C.CAPACITOR CH 50V 0.033U	1	
C307	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1		C861	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C308	ECUX1H560JCV	C.CAPACITOR 50V 56P	1		C862	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C309	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1						
C310	ECEA1CKA100	E.CAPACITOR 16V 10U	1				DIODES		
C311	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1		D301	MA141K	DIODE	1	
C312	ECUX1H270JCV	C.CAPACITOR 50V 27P	1		D303, 04	MA141K	DIODE	2	
C313	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1		D307	1SS283	DIODE	1	
C314	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1		D310	MA141K	DIODE	1	
C315	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1		D381	MA165	DIODE	1	
C316	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1						
C317	ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1				DELAYS		
C318	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1		DL802	EFDW1A13A	DELAY	1	
C319	ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1						
C320	ECUM1H223KBV	C.CAPACITOR CH 50V 0.022U	1						
C321	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1				INTEGRATED CIRCUITS		
C322	ECUX1H333KBV	C.CAPACITOR CH 50V 0.033U	1		IC301	MSM7403MS	IC	1	
C323	ECEA1CKA100	E.CAPACITOR 16V 10U	1		IC302	TDA9715	IC	1	SUPPLIED FROM M.B.V.
C325	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1		IC801	MS2352FP	IC	1	
C326	ECUX1H222JCV	C.CAPACITOR CH 50V 2200P	1						
C327	ECEA1CKA100	E.CAPACITOR 16V 10U	1				COILS		
C328	ECUX1HB21JCV	C.CAPACITOR 50V 820P	1		L301	VLQEL05S330K	COIL 33UH	1	
C329	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1		L302, 03	VLQEL05S390K	COIL 39UH	2	
C330	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1		L304	ELESE101KA	COIL 100UH	1	
C331	ECUX1H330JCV	C.CAPACITOR 50V 33P	1		L306	VLQEL05S820J	COIL 82UH	1	
C332	ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1		L307	ELESE101KA	COIL 100UH	1	
C333	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1		L308	VLQEL05S390K	COIL 39UH	1	
C334	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1		L802	VLQEL05S101K	COIL 100UH	1	
C336	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1		L803	ELESE270KA	COIL 27UH	1	
C337	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1		L805, 06	VLQEL05S150K	COIL 15UH	2	
C338, 39	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	2		L807	VLQEL05S101K	COIL 100UH	1	
C340	ECUX1H2232FV	C.CAPACITOR 50V 0.022U	1		L808	ELESN6R8JA	COIL 6.8UH	1	
C341	ECUX1H470JCV	C.CAPACITOR 50V 47P	1		L809-11	ELESE101KA	COIL 100UH	3	
C342	ECUX1HB20JCV	C.CAPACITOR CH 50V 82P	1		L813	ELESE101KA	COIL 100UH	1	
C381	ECUX1H1042FV	C.CAPACITOR 50V 0.1U	1				CONNECTORS		
C801-05	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	5		PS301	VJS3044FO09W	CONNECTOR (FEMALE)	1	
C806	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1		PS302	VJS3044FO12W	CONNECTOR (FEMALE)	1	
C808	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1		PS303	VJS3044FO06W	CONNECTOR (FEMALE)	1	
C811	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1						
C813	ECUX1H181JCV	C.CAPACITOR 50V 180P	1						
C814	ECUX1H270JCV	C.CAPACITOR 50V 27P	1						
C815	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1						
C820	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		TRANSISTORS		
Q301	2SC3930	TRANSISTOR	1	
Q302	2SB1218A	TRANSISTOR	1	
Q802	2SD1819A	TRANSISTOR	1	
Q804	2SC3930	TRANSISTOR	1	
		COMBINATION PARTS		
QR801	UN5213	TRANSISTOR-RESISTOR	1	
QR804	UN5113	TRANSISTOR	1	
QR807	UN5213	TRANSISTOR-RESISTOR	1	
		RESISTORS		
R301	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R302	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R303,04	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	2	
R305,06	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R307	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R308,09	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R310	ERJ6GEYJ125	M.RESISTOR CH 1/10W 1.2M	1	
R311	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R312	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R317	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R319	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R320	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R321	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R322	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R325	ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R328	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R329	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R331,32	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R333	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R334,35	ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	2	
R337	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R338	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R380	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R382	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R801	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R802	ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R803	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R804	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R805	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R809	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R811	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R812	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R813,14	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2	
R819,20	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2	
R821	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R822	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R823	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R824,25	ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	2	
R826	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R827,28	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	2	
R829	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R830	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R832	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R833	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R834	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R835	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R836	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R837	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R838	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R839	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R840	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R843	ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R853	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R855	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R856	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
		VARIABLE RESISTORS		
VR301	EVMEASAOB13	V.RESISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
VR302	EVMEASAOB14	V.RESISTOR	1	
VR303,04	EVMEASAOB53	V.RESISTOR	2	
VR305,06	EVMEASAOB14	V.RESISTOR	2	
VR801	EVMEASAOB14	V.RESISTOR	1	
		CRYSTAL OSCILLATORS		
X801	VSK0162	CRYSTAL OSCILLATOR	1	
		VEPO3A01DPE		(RTL)NV-SD40EG
		PACK C.B.A.		SUPPLIED FROM M.B.V.
		CAPACITORS		
C301	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C302	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C303,04	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	2	
C305,06	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	2	
C307	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C308	ECUX1H560JCV	C.CAPACITOR 50V 56P	1	
C309	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C310	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C311	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1	
C312	ECUX1H270JCV	C.CAPACITOR 50V 27P	1	
C313	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C314	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C315	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C316	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C317	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C318	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C319	ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C320	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C321	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C322	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C323	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C325	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C326	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C327	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C328	ECUX1H821JCV	C.CAPACITOR 50V 820P	1	
C329	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C330	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C331	ECUX1H560JCV	C.CAPACITOR 50V 56P	1	
C332	ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C333	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C334	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C336	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C337	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C338,39	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	2	
C340	ECUX1H2232FV	C.CAPACITOR 50V 0.022U	1	
C341	ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
C342	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C381	ECUX1H1042FV	C.CAPACITOR 50V 0.1U	1	
C801-05	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	5	
C806	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C808	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C811	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C813	ECUX1H181JCV	C.CAPACITOR 50V 180P	1	
C814	ECUX1H270JCV	C.CAPACITOR 50V 27P	1	
C815	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C820	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C821,22	ECUX1H560JCV	C.CAPACITOR 50V 56P	2	
C823,24	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	2	
C825	ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
C826-31	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	6	
C832	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C833	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C834	ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
C835	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C836	ECEA1HKA0R1	E. CAPACITOR 50V 0.1U	1	
C837	ECQB1H332JH	P. CAPACITOR 50V 3300P	1	
C838	ECUX1H331JCV	C. CAPACITOR 50V 330P	1	
C839	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C840	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1	
C841	ECEAOJKA101	E. CAPACITOR 6.3V 100U	1	
C842	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C843	ECUX1H2232FV	C. CAPACITOR 50V 0.022U	1	
C844	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C845	ECEAOJKA470	E. CAPACITOR 6.3V 47U	1	
C846	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C847	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1	
C848	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C849	ECUX1H102KBV	C. CAPACITOR 50V 1000P	1	
C850	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1	
C851	ECEAOJKA101	E. CAPACITOR 6.3V 100U	1	
C852	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
C853	ECUX1H180JCV	C. CAPACITOR 50V 18P	1	
C854	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1	
C855	ECEAOJKA101	E. CAPACITOR 6.3V 100U	1	
C856	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1	
C857	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C858	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1	
C859	ECEA1HKA33	E. CAPACITOR 50V 0.33U	1	
C860	ECUM1H333KBN	C. CAPACITOR CH 50V 0.033U	1	
C861	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C862	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1	
C863	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C864	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	1	
C865,66	ECUX1H1032FV	C. CAPACITOR CH 50V 0.01U	2	
C868	ECUX1C1042FV	C. CAPACITOR CH 16V 0.1U	1	
C891,92	ECUX1H2232FV	C. CAPACITOR 50V 0.022U	2	
		DIODES		
D301	MA141K	DIODE	1	
D303,04	MA141K	DIODE	2	
D307	1SS283	DIODE	1	
D310	MA141K	DIODE	1	
D381	MA165	DIODE	1	
D802	MA141K	DIODE	1	
		DELAYS		
DL801	EFDUN124A13N	DELAY	1	
DL802	EFDWL1A13A	DELAY	1	
		INTEGRATED CIRCUITS		
IC301	MSM7403MS	IC	1	
IC302	TD9715	IC	1	SUPPLIED FROM M.B.V.
IC801	M52352FP	IC	1	
		COILS		
L301	VLQEL05S330K	COIL 33UH	1	
L302,03	VLQEL05S390K	COIL 39UH	2	
L304	ELESE101KA	COIL 100UH	1	
L306	VLQEL05S820J	COIL 82UH	1	
L307	ELESE101KA	COIL 100UH	1	
L308	VLQEL05S390K	COIL 39UH	1	
L802	VLQEL05S101K	COIL 100UH	1	
L803	ELESE270KA	COIL 27UH	1	
L805,06	VLQEL05S150K	COIL 15UH	2	
L807	VLQEL05S101K	COIL 100UH	1	
L808	ELESN6R8JA	COIL 6.8UH	1	
L809-11	ELESE101KA	COIL 100UH	3	
L813	ELESE101KA	COIL 100UH	1	
L814,15	VLQEL05S150K	COIL 15UH	2	
		CONNECTORS		
PS301	VJS3044F009W	CONNECTOR (FEMALE)	1	
PS302	VJS3044F012W	CONNECTOR (FEMALE)	1	
PS303	VJS3044F006W	CONNECTOR (FEMALE)	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		TRANSISTORS		
Q301	2SC3930	TRANSISTOR	1	
Q302	2SB1218A	TRANSISTOR	1	
Q802	2SD1819A	TRANSISTOR	1	
Q804,05	2SC3930	TRANSISTOR	2	
Q806	2SD1819A	TRANSISTOR	1	
Q807	2SB1218A	TRANSISTOR	1	
		COMBINATION PARTS		
QR801	UN5213	TRANSISTOR-RESISTOR	1	
QR804	UN5113	TRANSISTOR	1	
QR806	UN5113	TRANSISTOR	1	
QR807	UN5213	TRANSISTOR-RESISTOR	1	
		RESISTORS		
R301	ERJ3GEYJ102	M. RESISTOR 1/16W 1K	1	
R302	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R303,04	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	2	
R305,06	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R307	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R308,09	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R310	ERJ6GEYJ125	M. RESISTOR CH 1/10W 1.2M	1	
R311	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R312	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R317	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R319	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R320	ERJ3GEYJ102	M. RESISTOR 1/16W 1K	1	
R321	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R322	ERJ3GEYJ822	M. RESISTOR CH 1/16W 8.2K	1	
R325	ERJ3GEYJ332	M. RESISTOR 1/16W 3.3K	1	
R328	ERJ3GEYJ102	M. RESISTOR 1/16W 1K	1	
R329	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R331,32	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R333	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R334,35	ERJ3GEYJ152	M. RESISTOR 1/16W 1.5K	2	
R337	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R338	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R380	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R382	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R801	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
R802	ERJ3GEYJ332	M. RESISTOR 1/16W 3.3K	1	
R803	ERJ3GEYJ102	M. RESISTOR 1/16W 1K	1	
R804	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R805	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R809	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R811	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R812	ERJ3GEYJ102	M. RESISTOR 1/16W 1K	1	
R813,14	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	2	
R819,20	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	2	
R821	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R822	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R823	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R824,25	ERJ3GEYJ152	M. RESISTOR 1/16W 1.5K	2	
R826	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R827,28	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	2	
R829	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R830	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R832	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R833	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R834	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R835	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R836	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R837	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R838	ERJ6GEYF271	M. RESISTOR CH 1/10W 270	1	
R839	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R840	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R841	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R843	ERJ3GEYJ152	M. RESISTOR 1/16W 1.5K	1	
R845	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R846	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R847	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R848	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1		C811	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
R849	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1		C813	ECUX1H181JCV	C.CAPACITOR 50V 180P	1	
R850	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		C814	ECUX1H270JCV	C.CAPACITOR 50V 27P	1	
R851	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1		C815	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
R852	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1		C820	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
R853	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		C821, 22	ECUX1H560JCV	C.CAPACITOR 50V 56P	2	
R855	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		C823, 24	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	2	
R856	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1		C825	ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
					C826-31	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	6	
		VARIABLE RESISTORS			C832	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
VR301	EVMEASA00B13	V.RESISTOR	1		C833	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
VR302	EVMEASA00B14	V.RESISTOR	1		C834	ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
VR303, 04	EVMEASA00B53	V.RESISTOR	2		C835	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
VR305, 06	EVMEASA00B14	V.RESISTOR	2		C836	ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
VR801	EVMEASA00B14	V.RESISTOR	1		C837	ECQ81H332JH	P.CAPACITOR 50V 3300P	1	
VR802, 03	EVMEASA00B13	V.RESISTOR	2		C838	ECUX1H331JCV	C.CAPACITOR 50V 330P	1	
					C839	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
					C840	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
		CRYSTAL OSCILLATORS			C841	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
X801	VSX0162	CRYSTAL OSCILLATOR	1		C842	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
					C843	ECUX1H2232FV	C.CAPACITOR 50V 0.022U	1	
					C844	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
					C845	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
					C846	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
					C847	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
					C848	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
					C849	ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
					C850	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
					C851	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
	■ VEPO3A01EPE	LUMINANCE & CHROMINANCE	(RTL)NV-SD40B		C852	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
		PACK C.B.A.	SUPPLIED FROM M.B.V.		C853	ECUX1H180JCV	C.CAPACITOR 50V 18P	1	
					C854	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
					C855	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
		CAPACITORS			C856	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C301	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1		C857	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C302	ECEA1CKA100	E.CAPACITOR 16V 10U	1		C858	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C303, 04	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	2		C859	ECEA1HKAR33	E.CAPACITOR 50V 0.33U	1	
C305, 06	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	2		C860	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C307	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1		C861	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C308	ECUX1H560JCV	C.CAPACITOR 50V 56P	1		C862	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C309	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1		C863	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C310	ECEA1CKA100	E.CAPACITOR 16V 10U	1		C864	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C311	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1		C865, 66	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	2	
C312	ECUX1H270JCV	C.CAPACITOR 50V 27P	1						
C313	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1				DIODES		
C314	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1		D301	MA141K	DIODE	1	
C315	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1		D303, 04	MA141K	DIODE	2	
C316	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1		D307	1SS283	DIODE	1	
C317	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1		D310	MA141K	DIODE	1	
C318	ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1		D381	MA165	DIODE	1	
C319	ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1		D802	MA141K	DIODE	1	
C320	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1						
C321	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1						
C322	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1				DELAYS		
C323	ECEA1CKA100	E.CAPACITOR 16V 10U	1		DL801	EPDUN124A13N	DELAY	1	
C325	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1		DL802	EPDWA1A13A	DELAY	1	
C326	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1						
C327	ECEA1CKA100	E.CAPACITOR 16V 10U	1						
C328	ECUX1H821JCV	C.CAPACITOR 50V 820P	1				INTEGRATED CIRCUITS		
C329	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1		IC301	MSM7403MS	IC	1	
C330	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1		IC302	TDA9715	IC	1	SUPPLIED FROM M.B.V.
C331	ECUX1H330JCV	C.CAPACITOR 50V 33P	1		IC801	M52352FP	IC	1	
C332	ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1						
C333	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1						
C334	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1				COILS		
C336	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1		L301	VLQEL05S330K	COIL 33UH	1	
C337	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1		L302, 03	VLQEL05S390K	COIL 39UH	2	
C338, 39	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	2		L304	ELESE101KA	COIL 100UH	1	
C340	ECUX1H2232FV	C.CAPACITOR 50V 0.022U	1		L306	VLQEL05S820J	COIL 82UH	1	
C341	ECUX1H470JCV	C.CAPACITOR 50V 47P	1		L307	ELESE101KA	COIL 100UH	1	
C342	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1		L308	VLQEL05S390K	COIL 39UH	1	
C381	ECUX1H1042FV	C.CAPACITOR 50V 0.1U	1		L802	VLQEL05S101K	COIL 100UH	1	
C801-05	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	5		L803	ELESE270KA	COIL 27UH	1	
C806	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1		L805, 06	VLQEL05S150K	COIL 15UH	2	
C808	ECUX1H1032FV	C.CAPACITOR CH 50V 0.01U	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L807	VLQEL05S101K	COIL 100UH	1		R832	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
L808	ELESN6R8JA	COIL 6.8UH	1		R833	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
L809-11	ELESE101KA	COIL 100UH	3		R834	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
L813	ELESE101KA	COIL 100UH	1		R835	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
L814,15	VLQEL05S150K	COIL 15UH	2		R836	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
					R837	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
		CONNECTORS			R838	ERJ6GEYF271	M.RESISTOR CH 1/10W 270	1	
PS301	VJS3044F009W	CONNECTOR (FEMALE)	1		R839	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
PS302	VJS3044F012W	CONNECTOR (FEMALE)	1		R840	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
PS303	VJS3044F006W	CONNECTOR (FEMALE)	1		R841	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
					R843	ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
					R845	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
		TRANSISTORS			R846	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
Q301	2SC3930	TRANSISTOR	1		R847	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
Q302	2SB1218A	TRANSISTOR	1		R848	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
Q802	2SD1819A	TRANSISTOR	1		R849	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
Q804,05	2SC3930	TRANSISTOR	2		R850	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
Q806	2SD1819A	TRANSISTOR	1		R851	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
Q807	2SB1218A	TRANSISTOR	1		R852	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
					R853	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
					R855	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
		COMBINATION PARTS			R856	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
QR301,02	UN5212	TRANSISTOR-RESISTOR	2				VARIABLE RESISTORS		
QR801	UN5213	TRANSISTOR-RESISTOR	1		VR301	EVMEASAO0B13	V.RESISTOR	1	
QR804	UN5113	TRANSISTOR	1		VR302	EVMEASAO0B14	V.RESISTOR	1	
QR806	UN5113	TRANSISTOR	1		VR303,04	EVMEASAO0B53	V.RESISTOR	2	
QR807	UN5213	TRANSISTOR-RESISTOR	1		VR305,06	EVMEASAO0B14	V.RESISTOR	2	
					VR801	EVMEASAO0B14	V.RESISTOR	1	
		RESISTORS			VR802,03	EVMEASAO0B13	V.RESISTOR	2	
R301	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1						
R302	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1				CRYSTAL OSCILLATORS		
R303,04	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	2		X801	VSK0162	CRYSTAL OSCILLATOR	1	
R305,06	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2						
R307	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1						
R308,09	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2						
R310	ERJ6GEYJ125	M.RESISTOR CH 1/10W 1.2M	1						
R311	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1						
R312	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1						
R314	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1						
R315	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1						
R317	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1						
R319	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1						
R320	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1			VEP07538G	VPS C.B.A.		(RTL)
R321	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1						NV-SD30EG,SD40EG
R322	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1						
R325	ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1				CAPACITORS		
R328	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1		C7801	ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
R329	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1		C7802	ECQB1H471JZ	P.CAPACITOR 50V 470P	1	
R331,32	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2		C7803	ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
R333	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1		C7804	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
R334,35	ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	2		C7805	ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
R337	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		C7806	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
R338	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1		C7815	VCYE1C104MR1	S.CAPACITOR 16V 0.1U	1	
R380	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		C7816	ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
R382	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1		C7851	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
R801	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1		C7852	ECEA1CK101	E.CAPACITOR 16V 100U	1	
R802	ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1		C7853,54	ECCF1H330JC	C.CAPACITOR 50V 33P	2	
R803	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1		C7855,56	ECEA1HK010	E.CAPACITOR 50V 1U	2	
R804	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1						
R805	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1				DIODES		
R809	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		D7851	1SS254	DIODE	1	
R811	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1						
R812	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1						
R813,14	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2				INTEGRATED CIRCUITS		
R819,20	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2		IC7801	SAA4700	IC	1	
R821	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1		IC7851	MN158413VSSY	IC	1	
R822	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1						
R823	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1						
R824,25	ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	2				CONNECTORS		
R826	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1		PS1	VJS3043B010W	CONNECTOR (FEMALE)	1	
R827,28	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	2						
R829	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1						
R830	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1				COMBINATION PARTS		

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
QR7851	UN6211	TRANSISTOR-RESISTOR	1	
QR7852	UN6213	TRANSISTOR-RESISTOR	1	
		RESISTORS		
R7801	ERDS2TJ472	C. RESISTOR 1/4W 4.7K	1	
R7802	EROS2CKG7502	M. RESISTOR 1/4W 75K	1	
R7803, 04	ERDS2TJ103	C. RESISTOR 1/4W 10K	2	
R7805	ERDS2TJ473	C. RESISTOR 1/4W 47K	1	
R7806	EROS2CKG8201	M. RESISTOR 1/4W 8.2K	1	
R7851	ERDS2TJ103	C. RESISTOR 1/4W 10K	1	
R7852	ERDS2TJ332	C. RESISTOR 1/4W 3.3K	1	
		CRYSTAL OSCILLATORS		
X7851	EF0M4ROM03C2	CRYSTAL OSCILLATOR	1	
		TV DEMODULATOR PACK C.B.A.	(RTL)	
			NV-SD30EG, SD40EG	
			SUPPLIED FROM M.B.V.	
		CAPACITORS		
C701	ECEA1EK4R7	E. CAPACITOR 25V 4.7U	1	
C702	ECEA1CK5100	E. CAPACITOR 16V 10U	1	
C703	ECEA1HK2R2	E. CAPACITOR 50V 2.2U	1	
C707	ECEA1HK0R1	E. CAPACITOR 50V 0.1U	1	
C708	ECEA1CK5100	E. CAPACITOR 16V 10U	1	
C710	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C717-20	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	4	
C721	ECEA1HKR27K	E. CAPACITOR 50V 0.27U	1	
C722	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C725	ECQV1H104J2	P. CAPACITOR 50V 0.1U	1	
C727	ECUM1H080DCN	C. CAPACITOR CH 50V 80P	1	
C728	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C730	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C731	ECEA1CK5100	E. CAPACITOR 16V 10U	1	
C732	ECQV1H224B0	P. CAPACITOR 50V 0.22U	1	
C734	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C735	ECUM1H070DCN	C. CAPACITOR CH 50V 7P	1	
C736	ECQB1H103JH	P. CAPACITOR 50V 0.01U	1	
C737	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1	
C739	ECEA1HK010	E. CAPACITOR 50V 1U	1	
C740	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C741	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C742	ECUM1H030CCN	C. CAPACITOR CH 50V 3P	1	
C743	ECUM1H270RCN	C. CAPACITOR CH 50V 27P	1	
C744	ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
C745	ECUM1H680JPN	C. CAPACITOR CH 50V 68P	1	
C746	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1	
C748	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C749	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C760	ECQV1H473J2	P. CAPACITOR 50V 0.047U	1	
C782	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C790	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C797, 98	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	2	
C7651	ECEA1CKN100	E. CAPACITOR 16V 10U	1	
C7653	ECQB1H332JH	P. CAPACITOR 50V 0.27U	1	
C7668	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C7685	ECEA1HK010	E. CAPACITOR 50V 1U	1	
		DIODES		
D710	MA3100L	DIODE	1	
D771	MA151WK	DIODE	1	
D772	MA165VT	DIODE	1	
D7672, 73	MA3150-H	DIODE	2	
		INTEGRATED CIRCUITS		

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC701	M51366SP-G	IC	1	SUPPLIED FROM M.B.V.
		COILS		
L701	ELESQ680KA	COIL 68UH	1	
L711	ELQTR22XB	COIL 0.22UH	1	
L714	VLQ0305J1R2	COIL 1.2UH	1	
L716	ELESQ560KA	COIL 56UH	1	
L717, 18	ELESQ680KA	COIL 68UH	2	
L719	ELESQ120KA	COIL 12UH	1	
		CONNECTORS		
PS701-03	VJS3043B005W	CONNECTOR (FEMALE) 5P	3	
PS704	VJS3043B006W	CONNECTOR (FEMALE) 6P	1	
		TRANSISTORS		
Q703	MSD601-S	TRANSISTOR	1	
Q712	2SC1317	TRANSISTOR	1	
Q713	MSD1328-S	TRANSISTOR	1	
Q771	MSD601-S	TRANSISTOR	1	
		COMBINATION PARTS		
QR701, 02	MRN1404	TRANSISTOR-RESISTOR	2	
QR711, 12	MRN1403	TRANSISTOR-RESISTOR	2	
QR714	MRN1402	TRANSISTOR-RESISTOR	1	
		RESISTORS		
R716	ERJ6GEYJ152	M. RESISTOR CH 1/10W 1.5K	1	
R717	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R718	ERJ6GEYJ754	M. RESISTOR CH 1/10W 750K	1	
R719, 20	ERJ6GEYJ682	M. RESISTOR CH 1/10W 6.8K	2	
R721	ERJ6GEYJ272	M. RESISTOR CH 1/10W 2.7K	1	
R722	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R723	ERJ6GEYJ183	M. RESISTOR CH 1/10W 18K	1	
R724	ERDS2TJ101	C. RESISTOR 1/4W 100	1	
R725	ERJ6GEYJ182	M. RESISTOR CH 1/10W 1.8K	1	
R726	ERJ6GEYJ472	M. RESISTOR CH 1/10W 4.7K	1	
R727	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R728	ERDS2TJ471	C. RESISTOR 1/4W 470	1	
R729, 30	ERJ6GEYJ331	M. RESISTOR CH 1/10W 330	2	
R737	ERJ6GEYJ274	M. RESISTOR CH 1/10W 270K	1	
R738	ERJ6GEYJ334	M. RESISTOR CH 1/10W 330K	1	
R739	ERJ6GEYJ681	M. RESISTOR CH 1/10W 680	1	
R740	ERJ6GEYJ473	M. RESISTOR CH 1/10W 47K	1	
R741	ERJ6GEYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R743	ERJ6GEYJ470	M. RESISTOR CH 1/10W 47	1	
R744	ERJ6GEYJ821	M. RESISTOR CH 1/10W 820	1	
R745	ERJ6GEYJ331	M. RESISTOR CH 1/10W 330	1	
R746	ERDS2TJ181	C. RESISTOR 1/4W 180	1	
R747	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R750	ERJ6GEYJ182	M. RESISTOR CH 1/10W 1.8K	1	
R757	ERJ6GEYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R759	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R763	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R764	ERJ6GEYJ822	M. RESISTOR CH 1/10W 8.2K	1	
R772	ERJ6GEYJ271	M. RESISTOR CH 1/10W 270	1	
R773	ERJ6GEYJ472	M. RESISTOR CH 1/10W 4.7K	1	
R774	ERJ6GEYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R792	ERDS2TJ120	C. RESISTOR 1/4W 12	1	
R795	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	1	
R7656	ERJ6GEYJ221	M. RESISTOR CH 1/10W 220	1	
R7676	ERG1SJ152	M. RESISTOR 1W 1.5K	1	
		TRANSFORMERS		
T703	EIV5ECO13A	TRANSFORMER	1	
T704	EIV5ECO06A1	TRANSFORMER	1	
T711	EIS5ECO04A	TRANSFORMER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		VARIABLE RESISTORS			C7678	ECEA1CK100	E.CAPACITOR 16V 10U	1	
VR701,02	EVTEASAO0B23	V.RESISTOR	2		C7679	ECEA1HKW010	E.CAPACITOR 50V 1U	1	
VR751	EVNCBAA00B53	V.RESISTOR	1		C7680	ECEA1HK010	E.CAPACITOR 50V 1U	1	
					C7681,82	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	2	
		CRYSTAL OSCILLATORS							
X710	VLF1035	CRYSTAL OSCILLATOR	1				DIODES		
X711	VLF0638	CRYSTAL OSCILLATOR	1		D710	MA3100L	DIODE	1	
X712	VLF0637	FILTER	1		D771	MA151WK	DIODE	1	
X716	EFCV4045A4	CRYSTAL OSCILLATOR	1		D772	1SS254	DIODE	1	
					D773	MA151K	DIODE	1	
					D7601	MA151A	DIODE	1	
		MISCELLANEOUS			D7602	MA3082M	DIODE	1	
	ENV57851H6	TUNER	1	<1>					
	VSC3242	SHIELD COVER (MAIN)	1				INTEGRATED CIRCUITS		
	VSC3241	SHIELD COVER (TOP)	1		IC701	M51366SP	IC	1	
	VSC2714	SHIELD COVER (BOTTOM)	1		IC7651	AN5421	IC	1	
					IC7652	AN5043	IC	1	
					IC7653	BU4066BF	IC	1	
							COILS		
	VEP07645S	TV DEMODULATOR PACK C.B.A.		(RTL)NV-SD30B, SD40B	L701	ELESQ680KA	COIL 68UH	1	
				SUPPLIED FROM M.B.V.	L713, 14	VLQ0305J1R2	COIL 1.2UH	2	
					L717, 18	ELESQ680KA	COIL 68UH	2	
					L719	VLQEL05F8R2K	COIL 8.2UH	1	
					L720	ELESQ680KA	COIL 68UH	1	
		CAPACITORS					CONNECTORS		
C701	ECEA1EK4R7	E. CAPACITOR 25V 4.7U	1		PS701-03	VJS3043B005W	CONNECTOR (FEMALE) 5P	3	
C702	ECEA1CK100	E. CAPACITOR 16V 10U	1		PS704	VJS3043B006W	CONNECTOR (FEMALE) 6P	1	
C703	ECEA1HK2R2	E. CAPACITOR 50V 2.2U	1						
C706	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1				TRANSISTORS		
C708	ECEA1CK100	E. CAPACITOR 16V 10U	1		Q703	MSD601-S	TRANSISTOR	1	
C710	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		Q712	2SC1317	TRANSISTOR	1	
C717-20	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	4		Q713	2SD1328-S	TRANSISTOR	1	
C721	ECEA1HKR27K	E. CAPACITOR 50V 0.27U	1		Q771, 72	MSD601-S	TRANSISTOR	2	
C722	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1						
C725	ECQV1H104J2	P. CAPACITOR 50V 0.1U	1				COMBINATION PARTS		
C728	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		QR701,02	MRN1404	TRANSISTOR-RESISTOR	2	
C730	ECEA1CK100	E. CAPACITOR 16V 10U	1		QR713	MRN1402	TRANSISTOR-RESISTOR	1	
C731	ECEA1CKS100	E. CAPACITOR 16V 10U	1		QR7601	MRN1404	TRANSISTOR-RESISTOR	1	
C732	ECQV1H224B0	P. CAPACITOR 50V 0.22U	1						
C734	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1				RESISTORS		
C735	ECUM1H070DCN	C. CAPACITOR CH 50V 7P	1		R716	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
C736	ECQB1H103JH	P. CAPACITOR 50V 0.01U	1		R717	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
C737	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1		R718	ERJ6GEYJ754	M.RESISTOR CH 1/10W 750K	1	
C739	ECEA1HK010	E. CAPACITOR 50V 1U	1		R719	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
C740	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		R720	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
C741	ECEA1CK100	E. CAPACITOR 16V 10U	1		R721	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
C742	ECUM1H030CN	C. CAPACITOR CH 50V 3P	1		R723	ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
C743	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1		R724	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
C744	ECEA1HKR47	E. CAPACITOR 50V 0.47U	1		R725	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
C745	ECUM1H680JPN	C. CAPACITOR CH 50V 68P	1		R726	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
C746	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1		R727	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
C748	ECEA1CK330	E. CAPACITOR 16V 33U	1		R728	ERDS2TJ471	C.RESISTOR 1/4W 470	1	
C749	ECEA1CK100	E. CAPACITOR 16V 10U	1		R729, 30	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	2	
C760	ECQV1H563J2	P. CAPACITOR 50V 0.056U	1		R737	ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
C782	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1		R738	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
C7651	ECEA1CKN100	E. CAPACITOR 16V 10U	1		R739	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
C7653	ECQB1H392JH	P. CAPACITOR 50V 3900P	1		R740	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
C7654	ECQB1H103JH	P. CAPACITOR 50V 0.01U	1		R743	ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
C7655, 56	ECEA1HK010	E. CAPACITOR 50V 1U	2		R744	ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
C7657	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		R745	ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	
C7658	ECQPH1562J2	P. CAPACITOR 50V 5600P	1		R746	ERDS2TJ181	C.RESISTOR 1/4W 180	1	
C7659	ECQB1H272JH	P. CAPACITOR 50V 2700P	1		R747	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
C7661	ECQV1H104J2	P. CAPACITOR 50V 0.1U	1		R750	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
C7662	ECQV1H683J2	P. CAPACITOR 50V 0.068U	1		R751	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
C7663	ECQV1H823J2	P. CAPACITOR 50V 0.082U	1		R756	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
C7664	ECQB1H272JH	P. CAPACITOR 50V 0.027U	1		R757, 58	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
C7665, 66	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	2						
C7667	ECEA1HKA100	E. CAPACITOR 50V 10U	1						
C7675	ECEA1HKW010	E. CAPACITOR 50V 1U	1						
C7676, 77	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	2						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R536	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1		Q502	2SB709	TRANSISTOR CHIP	1	
R537	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1		Q503	2SC2295	TRANSISTOR	1	
R541	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1		Q504	2SB709	TRANSISTOR CHIP	1	
		VARIABLE RESISTORS					COMBINATION PARTS		
VR501	EVNDCAA03B23	V.RESISTOR	1		QR502	UN2212	TRANSISTOR-RESISTOR	1	
VR502	EVNDCAA03B13	V.RESISTOR	1						
							RESISTORS		
		MISCELLANEOUS			R505	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
	VSC3768	SHIELD COVER (TOP)	1		R507	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
	VSC3769	SHIELD COVER (MAIN)	1		R509	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
	VSC3770	SHIELD COVER (BOTTOM)	1		R510	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
					R512	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
					R513	ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
					R514,15	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	2	
					R516	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
					R517	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
					R518	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
					R519	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
					R520	ERJ6GEYJ180	M.RESISTOR CH 1/10W 18	1	
	■ VEPO5182BPE	HEAD AMP C.B.A.		(RTL)NV-SD40EG/B	R521	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
				SUPPLIED FROM M.B.V.	R522	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
		CAPACITORS			R523,24	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	2	
C503	ECUM1H68QJCN	C.CAPACITOR CH 50V 68P	1		R525	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
C505	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1		R526	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
C508	ECUM1H22QJCN	C.CAPACITOR CH 50V 22P	1		R527	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
C509	ECEAOJK470	E.CAPACITOR 6.3V 47U	1		R528	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
C510	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		R529	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
C511	ECUM1H56QJCN	C.CAPACITOR CH 50V 56P	1		R530,31	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
C512	ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1		R533	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
C513	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		R534	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
C514	ECUM1H2232FN	C.CAPACITOR 50V 0.022U	1		R535	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
C515,16	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2		R536	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
C517	ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1		R537	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
C518	ECEA1HK010	E.CAPACITOR 50V 1U	1		R539,40	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	2	
C519	ECUM1C1052FN	C.CAPACITOR CH 16V 1U	1		R541	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
C520,21	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	2						
C528	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1				VARIABLE RESISTORS		
C529	ECUM1H2232FN	C.CAPACITOR 50V 0.022U	1		VR501	EVNDCAA03B23	V.RESISTOR	1	
C530	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1		VR502	EVNDCAA03B13	V.RESISTOR	1	
C533	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1						
C534,35	ECUM1H2232FN	C.CAPACITOR 50V 0.022U	2				MISCELLANEOUS		
C536,37	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	2			VSC3768	SHIELD COVER (TOP)	1	
C540	ECUM1H2232FN	C.CAPACITOR 50V 0.022U	1			VSC3769	SHIELD COVER (MAIN)	1	
C541	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1			VSC3770	SHIELD COVER (BOTTOM)	1	
C542,43	ECUM1H2232FN	C.CAPACITOR 50V 0.022U	2						
		DIODES							
D501-04	1S5254	DIODE	4						
		INTEGRATED CIRCUITS							
IC501	TEA5705	IC	1	SUPPLIED FROM M.B.V.		■ VEPO7701D	TIMER C.B.A.		(RTL)NV-SD30EG
									SUPPLIED FROM M.B.V.
		COILS					CAPACITORS		
L501	ELESE820KA	COIL 82UH	1		C7501	ECRHA030E41	TRIMMER 3P	1	
L506	ELESE151K	COIL 150UH	1		C7502	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
L508	ELESE101KA	COIL 100UH	1		C7503	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
L509	ELESE270KA	COIL 27UH	1		C7504	ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
L510	ELESE101KA	COIL 100UH	1		C7505	ECEA1HKS100	E.CAPACITOR 50V 10U	1	
					C7506	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
		CONNECTORS			C7507	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
P501	VJS1684	CONNECTOR (FEMALE)	1		C7509,10	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	2	
					C7511	ECEA1HKS22	E.CAPACITOR 50V 0.022U	1	
P5002	VJS3069T	CONNECTOR (FEMALE)	1		C7512	ECEAOJKS470	E.CAPACITOR 6.3V 47U	1	
					C7513	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
		TRANSISTORS			C7514	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
					C7515	ECEAOJKS470	E.CAPACITOR 6.3V 47U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		DISPLAY TUBES					CRYSTAL OSCILLATORS		
DP7501	VSL0271	DISPLAY TUBE	1		X7501	VSK0484	CRYSTAL OSCILLATOR	1	
					X7502	VSK0094	CRYSTAL OSCILLATOR	1	
		INTEGRATED CIRCUITS							
IC7501	MN187164VTSV	IC	1				MISCELLANEOUS		
IC7502	PST7026	IC	1			VGU6099	PICTURE VR KNOB	1	
IC7503	PST7043	IC	1			VJF0915	FIP HOLDER	1	
IC7504	XLJ9021B	IC	1			VMD206Q	LED HOLDER	1	
						VMD2061	SHUTTLE HOLDER	1	
						VSQ0815	SHUTTLE ENCODER	1	
IR7501	VEK6407	IR RECEIVER UNIT	1						
		COILS							
L7501	ELESE151K	COIL 150UH	1						
		CONNECTORS				VEPO7699D	TIMER C.B.A.		(RTL)NV-SD40EG
P7501	VJS3193B013A	CONNECTOR (FEMALE)	1						SUPPLIED FROM M.B.V.
P7502	VJS1679	CONNECTOR (FEMALE) 9P	1						
P7505	VJS3301	CONNECTOR (FEMALE)	1				CAPACITORS		
					C4801	ECEA1CK470	E.CAPACITOR 16V 47U	1	
		TRANSISTORS			C4802	ECEA1CK100	E.CAPACITOR 16V 10U	1	
Q7508	MSD601	TRANSISTOR-RESISTOR	1		C4804	ECUM1E1242FN	C.CAPACITOR CH 25V 0.12U	1	
Q7510	MSD601	TRANSISTOR-RESISTOR	1		C7501	ECRHA030E41	TRIMMER 3P	1	
					C7502	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
					C7503	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
		COMBINATION PARTS			C7504	ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
QR7501	MRN1404	TRANSISTOR-RESISTOR	1		C7505	ECEA1HKS100	E.CAPACITOR 50V 10U	1	
QR7503-06	MRN2404	TRANSISTOR-RESISTOR	4		C7506	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
					C7507	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
					C7509,10	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	2	
		RESISTORS			C7511	ECEA1HKS22	E.CAPACITOR 50V 0.22U	1	
R7501	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1		C7512	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
R7502	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1		C7513	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
R7503	ERJ6GEYK2R2	M.RESISTOR CH 1/10W 2.2	1		C7514	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
R7504	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1		C7515	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
R7512	ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1		C7518	ECEA1CK100	E.CAPACITOR 16V 10U	1	
R7513	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1		C7519	ECEA1CK101	E.CAPACITOR 16V 100U	1	
R7514	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1						
R7515,16	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2				DIODES		
R7517	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		D7501	MA3220	DIODE	1	
R7518,19	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2		D7504-06	MA221	DIODE	3	
R7521,22	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2		D7508	MA221	DIODE	1	
R7531	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		D7510	MA221	DIODE	1	
R7535	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1		D7512	MA221	DIODE	1	
R7536	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		D7516,17	MA221	DIODE	2	
R7537	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1		D7520	MA221	DIODE	1	
R7538,39	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2		D7522,23	MA221	DIODE	2	
R7540	ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1		D7525-27	MA221	DIODE	3	
R7541	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1		D7530	MA221	DIODE	1	
R7544,45	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2		D7537	MA221	DIODE	1	
R7548	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1		D7541,42	MA221	DIODE	2	
R7549	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1		D7546-49	LN376GCPXU	DIODE	4	
R7550	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		D7550-53	SEL2913KTP3	DIODE	4	
R7552-55	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	4		D7554-57	MA221	DIODE	4	
R7558	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1						
R7560	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1				DISPLAY TUBES		
					DP7501	VSL0271	DISPLAY TUBE	1	
		SWITCHES					INTEGRATED CIRCUITS		
SW7501-03	EVQ11409K	SWITCH	3		IC7501	MN187164VTSV	IC	1	
SW7506-11	EVQ11409K	SWITCH	6		IC7502	PST7026	IC	1	
SW7513,14	EVQ11409K	SWITCH	2		IC7503	PST7043	IC	1	
SW7516	EVQ11409K	SWITCH	1		IC7504	XLJ9021B	IC	1	
SW7522,23	EVQ11409K	SWITCH	2						
		VARIABLE RESISTORS							
VR7501	EVUF3AF15B24	V.RESISTOR	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IR7501	VER6407	IR RECEIVER UNIT	1						
							VARIABLE RESISTORS		
		JACKS			VR7501	EVUF3AF15B24	V.RESISTOR	1	
J4801	VJJ0281	MIC JACK	1						
							CRYSTAL OSCILLATORS		
		COILS			X7501	V SX0484	CRYSTAL OSCILLATOR	1	
L7501	ELESE151K	COIL 150UH	1		X7502	V SX0094	CRYSTAL OSCILLATOR	1	
		CONNECTORS					MISCELLANEOUS		
P7501	VJS3193B013A	CONNECTOR (FEMALE)	1			VGU6099	PICTURE VR KNOB	1	
P7502	VJS3193B015A	CONNECTOR (FEMALE) 15P	1			VJFO915	FIP HOLDER	1	
P7505	VJS3301	CONNECTOR (FEMALE)	1			VMD2060	LED HOLDER	1	
						VMD2035	JOG SHUTTLE HOLDER	1	
PP7501	VJP3042A004W	CONNECTOR (MALE)	1			VSQ0811	JOG SHUTTLE ENCODER	1	
PP7502	VJS3404A005A	CONNECTOR (FEMALE)	1						
PS4801	VJS3042B004W	CONNECTOR (FEMALE)	1						
		TRANSISTORS							
Q4801	2SA1034	TRANSISTOR	1			VEPO7699F	TIMER C.B.A.		(RTL)NV-SD40B
Q4802	2SC2405	TRANSISTOR	1						SUPPLIED FROM M.B.V.
Q7508	MSD601	TRANSISTOR-RESISTOR	1						
Q7510	MSD601	TRANSISTOR-RESISTOR	1						
							CAPACITORS		
					C4801	ECEA1CK470	E.CAPACITOR 16V 47U	1	
					C4802	ECEA1CK100	E.CAPACITOR 16V 10U	1	
		COMBINATION PARTS			C4804	ECUM1E124ZEN	C.CAPACITOR CH 25V 0.12U	1	
QR7501	MRN1404	TRANSISTOR-RESISTOR	1		C7501	ECRHA030E41	TRIMMER 3P	1	
QR7503-06	MRN2404	TRANSISTOR-RESISTOR	4		C7502	ECUM1H103ZEN	C.CAPACITOR CH 50V 0.01U	1	
					C7503	ECUM1H104ZEN	C.CAPACITOR CH 50V 0.1U	1	
					C7504	ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
		RESISTORS			C7505	ECEA1HKS100	E.CAPACITOR 50V 10U	1	
R4801	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		C7506	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
R4802	ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1		C7507	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
R4803	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		C7509,10	ECUM1H104ZEN	C.CAPACITOR CH 50V 0.1U	2	
R4804	ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1		C7511	ECEA1HKS22	E.CAPACITOR 50V 0.22U	1	
R4805	ERJ6GEYJ331	M.RESISTOR CH 1/10W 33K	1		C7512	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
R4806	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1		C7513	ECUM1H103ZEN	C.CAPACITOR CH 50V 0.01U	1	
R4807	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1		C7514	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
R4808	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1		C7515	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
R7501	ERJ6GYZOR00	M.RESISTOR CH 1/10W 0	1		C7518	ECEA1CK100	E.CAPACITOR 16V 10U	1	
R7502	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1		C7519	ECEA1CK101	E.CAPACITOR 16V 100U	1	
R7503	ERJ6GEYK2R2	M.RESISTOR CH 1/10W 2.2	1						
R7504	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1				DIODES		
R7512	ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1		D7501	MA3220	DIODE	1	
R7513	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1		D7504,05	MA221	DIODE	2	
R7514	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		D7508	MA221	DIODE	1	
R7515,16	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2		D7511,12	MA221	DIODE	2	
R7517	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		D7516,17	MA221	DIODE	2	
R7518-20	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	3		D7520	MA221	DIODE	1	
R7521,22	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2		D7525-27	MA221	DIODE	3	
R7531	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		D7534,35	MA221	DIODE	2	
R7535	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1		D7537	MA221	DIODE	1	
R7536	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		D7541	MA221	DIODE	1	
R7537	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1		D7546-49	LN376GCPXU	DIODE	4	
R7538,39	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2		D7550-53	SEL2913KTP3	DIODE	4	
R7540,41	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	2		D7554-57	MA221	DIODE	4	
R7544,45	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2		D7560	MA221	DIODE	1	
R7548	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1						
R7549	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1				DISPLAY TUBES		
R7550	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		DP7501	VSL0271	DISPLAY TUBE	1	
R7551-55	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	5						
R7558	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1						
R7560	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1						
R7562	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1				INTEGRATED CIRCUITS		
					IC7501	MN187164VTSV	IC	1	
		SWITCHES			IC7502	PST7026	IC	1	
SW7501-11	EVQ11409K	SWITCH	11		IC7503	PST7043	IC	1	
SW7513-16	EVQ11409K	SWITCH	4		IC7504	XLJ9021B	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
							SWITCHES		
					SW7501-11	EVQ11409K	SWITCH	11	
					SW7513,14	EVQ11409K	SWITCH	2	
IR7501	VEK6407	IR RECEIVER UNIT	1		SW7516	EVQ11409K	SWITCH	1	
					SW7517	VSS0303	SWITCH	1	
		JACKS							
J4801	VJJO281	MIC JACK	1				VARIABLE RESISTORS		
					VR7501	EVUF3AF15B24	V.RESISTOR	1	
		COILS							
L7501	ELESE151K	COIL 150UH	1				CRYSTAL OSCILLATORS		
					X7501	VSK0484	CRYSTAL OSCILLATOR	1	
		CONNECTORS			X7502	VSK0094	CRYSTAL OSCILLATOR	1	
P7501	VJS3193B013A	CONNECTOR (FEMALE)	1						
P7502	VJS3193B015A	CONNECTOR (FEMALE) 15P	1				MISCELLANEOUS		
P7505	VJS3301	CONNECTOR (FEMALE)	1			VGU6099	PICTURE VR KNOB	1	
						VJFO915	FIP HOLDER	1	
PP7501	VJP3042A004W	CONNECTOR (MALE)	1			VMD2060	LED HOLDER	1	
PP7502	VJS3404A005A	CONNECTOR (FEMALE)	1			VMD2035	JOG SHUTTLE HOLDER	1	
						VSQ0811	JOG SHUTTLE ENCODER	1	
PS4801	VJS3042B004W	CONNECTOR (FEMALE)	1						
		TRANSISTORS							
Q4801	2SA1034	TRANSISTOR	1			VEPO7716A	OPERATION C.B.A.		(RTL)NV-SD40EG/B
Q4802	2SC2405	TRANSISTOR	1						
Q7508	MSD601	TRANSISTOR-RESISTOR	1						
Q7510	MSD601	TRANSISTOR-RESISTOR	1						
							CONNECTORS		
		COMBINATION PARTS			PP6601	VJP3404A005W	CONNECTOR (MALE)	1	
QR7501	MRN1404	TRANSISTOR-RESISTOR	1						
QR7503-06	MRN2404	TRANSISTOR-RESISTOR	4						
							SWITCHES		
		RESISTORS			SW6601,02	EVQ11409K	SWITCH	2	
R4801	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1						
R4802	ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1						
R4803	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1						
R4804	ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1						
R4805	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1						
R4806	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1						
R4807	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1						
R4808	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1			VEPO1518G	POWER C.B.A.		(RTL)<1> NV-SD30EG,SD40EG SUPPLIED FROM M.B.V.
R7501	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1						
R7502	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1						
R7503	ERJ6GEYK2R2	M.RESISTOR CH 1/10W 2.2	1						
R7504	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1				CAPACITORS		
R7512	ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1		C1101	VCC0021	C.CAPACITOR	1	<1>
R7513	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1		C1106	VCC0021	C.CAPACITOR	1	<1>
R7514	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		C1107	ECQU2A154MNB	P.CAPACITOR 250V 0.15U	1	<1>
R7515,16	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2		C1108	ECQU2A104MN	P.CAPACITOR 250V 0.01U	1	<1>
R7517	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		C1109	ECEC2GG330	CAPACITOR	1	
R7518,19	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2		C1110	ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
R7521,22	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2		C1111	ECQB1H153JF	P.CAPACITOR 50V 0.015U	1	
R7531	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		C1114	VCC0022	C.CAPACITOR 1000P	1	<1>
R7535	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1		C1115	ECQE6473KF	P.CAPACITOR 50V	1	
R7536	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		C1116	VCK0106K221	CAPACITOR	1	
R7537	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1		C1117	ECQB1H123JF	P.CAPACITOR 50V 0.012U	1	
R7538,39	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2		C1118	ECEA1JFE470	E.CAPACITOR 63V 47U	1	
R7540,41	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	2		C1119	ECCD2H101J	C.CAPACITOR 500V 100P	1	
R7544,45	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2		C1120,21	ECEA1DF2681	E.CAPACITOR 20V 680U	2	
R7548	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1		C1122	ECEA1VFEB20	E.CAPACITOR 35V 82U	1	
R7549	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1		C1123	ECEA1DF2331	E.CAPACITOR 20V 330U	1	
R7550	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		C1124,25	ECEA1AF2331X	E.CAPACITOR 10V 330U	2	
R7552-55	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	4		C1126	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
R7558	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		C1127	ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
R7560	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1		C1128	ECA1CGE101X	E.CAPACITOR 16V 100U	1	
R7562	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		C1129	ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
					C1130	ECA1CGE101X	E.CAPACITOR 16V 100U	1	
					C1131	ECCD2H101J	C.CAPACITOR 500V 100P	1	
					C1133	ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		TRANSISTORS		
Q1101	2SC4300	TRANSISTOR	1	<1>
Q1102	2SD2259	TRANSISTOR	1	
Q1103	PS2561L1-1	TRANSISTOR-PHOTO COUPLER	1	<1>
Q1105	2SD1991	TRANSISTOR	1	
Q1106	2SD2375	TRANSISTOR	1	
Q1108	2SD2259	TRANSISTOR	1	
Q1109	2SD1996	TRANSISTOR	1	
		RESISTORS		
R1102	ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1103	ERG2SJ680	M.RESISTOR 2W 68	1	
R1104	ERX1SJ1R2	M.RESISTOR 1W 1.2	1	
R1105	ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1106	ERF2TK2R2	W.RESISTOR 2.2	1	
R1107	ERG3SJ683	M.RESISTOR 3W 68K	1	
R1108	ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1109	ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1110	ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R1111,12	EROS2CKG2701	M.RESISTOR 1/4W 2.7K	2	
R1113	EROS2CKG2702	M.RESISTOR 1/4W 27K	1	
R1114	ERDS1TJ472	C.RESISTOR 1/2W 4.7K	1	
R1115	ERDS2FJ820	C.RESISTOR 1/4W 82	1	
R1118	EROS2CKG2701	M.RESISTOR 1/4W 2.7K	1	
R1119	EROS2CKG2401	M.RESISTOR 1/4W 2.4K	1	
R1120	ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1121	ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1122,23	ERDS2FJ474	C.RESISTOR 1/4W 470K	2	
R1124	ERDS2FJ103	C.RESISTOR 1/4W 10K	1	
R1125	ERDS2FJ104	C.RESISTOR 1/4W 100K	1	
		TRANSFORMERS		
T1101	VLTO699	TRANSFORMER	1	<1>
		MISCELLANEOUS		
	VJF0318	FUSE HOLDER	2	<1>
	VMZ1184	CAPACITOR COVER (B)	3	<1>
		MECHANISM CONNECTION C.B.A.		(RTL)
		DIODES		
D1501	LN59L.VT	DIODE	1	
		INTEGRATED CIRCUITS		
IC1501,02	ON1387	IC	2	
		CONNECTORS		
P1503	VJS3316A002	CONNECTOR (FEMALE)	1	
P1504	VJS3317A004	CONNECTOR (FEMALE)	1	
P1505	VJS3193B013A	CONNECTOR (FEMALE)	1	
		TRANSISTORS		
Q1501,02	PN205L-NC.VT	TRANSISTOR	2	
		SWITCHES		
SW1501	VES0695	SAFETY SWITCH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		MISCELLANEOUS		
	VMD2029	REEL GUIDE	1	
		VEPOOS86A	POWER TRANSISTOR C.B.A.	(RTL)
		CONNECTORS		
P1506	VJP1230T	CONNECTOR (MALE) 3P	1	
		TRANSISTORS		
Q1503	2SB941QBB	TRANSISTOR	1	
		MOTOR C.B.A.		(RTL)
	VJP3316B002	CONNECTOR (MALE)	1	